

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
340001	2005	UH ₂₉₉	17.4	X	336.19474	41.09492	58.95281	3.16913	0.1794391	0.27309379	2.3528532	20	—	—
340002	2005	UL ₃₀₀	17.2	X	37.44771	280.33667	94.69791	7.30742	0.1396727	0.27253871	2.3560468	20	—	—
340003	2005	UJ ₃₀₅	17.2	X	331.53925	104.40920	54.50438	5.84312	0.0698959	0.28663215	2.2781699	20	—	—
340004	2005	UM ₃₀₈	17.1	X	110.11610	264.41296	48.30840	4.21902	0.1841482	0.27644555	2.3337965	20	—	—
340005	2005	UJ ₃₁₁	17.1	X	132.69846	338.48404	337.87860	3.18644	0.1824358	0.28458541	2.2890800	20	—	—
340006	2005	UL ₃₁₁	17.9	X	308.02470	2.56540	153.95953	2.08367	0.1515727	0.28370313	2.2938233	20	—	—
340007	2005	UH ₃₁₂	17.6	X	92.11972	182.56193	158.41636	2.00560	0.1443516	0.27968032	2.3157666	20	—	—
340008	2005	UX ₃₁₂	16.9	X	66.38373	95.18701	257.90823	4.61129	0.1318924	0.27500297	2.3419509	20	—	—
340009	2005	UL ₃₁₄	17.5	X	72.62601	280.12340	109.09446	4.03044	0.2392314	0.28324423	2.2963002	20	—	—
340010	2005	UN ₃₁₈	15.4	X	106.53372	247.01596	347.68768	2.16967	0.1491968	0.12398709	3.9830742	20	10 2.4	21.4
340011	2005	UW ₃₃₂	17.4	X	211.78350	189.44026	61.69658	5.05710	0.1074897	0.28383698	2.2931021	20	—	—
340012	2005	UK ₃₃₆	17.6	X	87.01571	156.94079	220.73414	6.08885	0.1255577	0.28217778	2.3020823	20	—	—
340013	2005	UR ₃₄₁	16.9	X	6.45135	1.84387	81.78364	4.16943	0.0977756	0.27712608	2.3299742	20	—	—
340014	2005	UF ₃₄₄	17.4	X	86.88634	330.44521	338.71468	3.08425	0.2958005	0.27599421	2.3363401	20	—	—
340015	2005	UN ₃₄₄	17.2	X	316.29848	133.89022	20.34756	6.84241	0.0349127	0.28272502	2.2991107	20	—	—
340016	2005	UB ₃₅₁	17.5	X	1.28750	218.39025	252.48196	5.95510	0.1850865	0.28155304	2.3054864	20	—	—
340017	2005	US ₃₅₃	16.5	X	206.03889	213.06091	264.40672	10.00243	0.1060353	0.27306377	2.3530256	20	—	—
340018	2005	UO ₃₅₅	15.8	X	325.58941	262.17562	246.52103	20.59478	0.2450786	0.27689200	2.3312872	20	—	—
340019	2005	UF ₃₆₉	16.8	X	229.60489	33.11826	205.96644	7.86996	0.2172199	0.28157384	2.3053729	20	—	—
340020	2005	UE ₃₇₀	17.7	X	21.77122	254.34117	124.73629	2.20844	0.1988428	0.27094778	2.3652605	20	—	—
340021	2005	UF ₃₇₁	17.3	X	314.35730	261.79802	243.34147	5.10273	0.0698749	0.27768739	2.3268333	20	—	—
340022	2005	UE ₃₇₄	17.0	X	359.17970	133.33299	236.30559	4.81854	0.0565947	0.26308742	2.4121408	20	11 21.8	19.7
340023	2005	UP ₃₇₆	16.9	X	113.97542	48.25343	286.31444	2.62043	0.2305727	0.28306870	2.2972494	20	—	—
340024	2005	UO ₃₈₇	17.0	X	40.61186	136.91804	249.09680	5.24013	0.0812810	0.27344165	2.3508573	20	—	—
340025	2005	UP ₃₉₃	16.8	X	77.30962	205.77620	123.26942	5.78893	0.2494227	0.27626763	2.3347984	20	—	—
340026	2005	UT ₄₀₃	17.8	X	323.88194	26.12203	86.69693	2.09756	0.1414000	0.27573403	2.3378096	20	—	—
340027	2005	UN ₄₁₂	17.6	X	239.38120	6.06324	210.24916	4.77847	0.0847123	0.27692758	2.3310875	20	—	—
340028	2005	UV ₄₁₂	15.8	X	279.47142	323.89439	141.30072	1.91197	0.1488441	0.12648770	3.9304039	20	10 20.2	21.0
340029	2005	UJ ₄₂₇	17.5	X	114.45465	249.40053	16.58705	3.33654	0.0507763	0.26517912	2.3994372	20	12 2.8	20.8
340030	2005	UG ₄₃₄	18.0	X	49.48437	201.54035	191.88441	3.57378	0.1475792	0.27885434	2.3203372	20	—	—
340031	2005	UW ₄₃₇	17.3	X	344.28199	58.44823	11.61135	2.39904	0.1784762	0.27106281	2.3645913	20	—	—
340032	2005	UZ ₄₄₀	17.3	X	66.00720	0.84614	2.00962	7.40940	0.1382400	0.27716447	2.3297591	20	—	—
340033	2005	UG ₄₄₄	17.6	X	33.98712	17.19495	42.35561	3.52823	0.2190881	0.27831372	2.3233411	20	—	—
340034	2005	UQ ₄₅₄	17.3	X	27.97549	289.48214	126.49254	5.32218	0.1970134	0.27741272	2.3283690	20	—	—
340035	2005	UN ₄₅₉	17.3	X	38.42483	158.85339	239.80036	6.23351	0.1152646	0.27518860	2.3408976	20	—	—
340036	2005	UL ₄₆₁	16.8	X	315.18440	207.48897	252.93953	4.57332	0.1247403	0.26829773	2.3808099	20	—	—
340037	2005	UX ₄₇₆	15.3	X	274.51228	6.81967	82.52426	5.08318	0.1531744	0.12640397	3.9321394	20	9 26.6	20.8
340038	2005	UU ₄₇₈	18.2	X	3.05308	48.86764	22.10248	2.33269	0.1858588	0.27258804	2.3557626	20	—	—
340039	2005	UH ₄₈₄	17.4	X	147.24651	187.22649	123.60534	7.92617	0.1368744	0.28596850	2.2816932	20	—	—
340040	2005	UN ₄₈₅	16.8	X	110.42079	270.88144	86.41983	5.94758	0.0832045	0.28437531	2.2902073	20	—	—
340041	2005	UE ₄₉₀	17.4	X	33.20674	23.59827	344.04186	6.70118	0.1197814	0.27192830	2.3595713	20	—	—
340042	2005	UP ₄₉₀	17.5	X	21.81922	303.82409	124.75435	3.30273	0.1464090	0.27929382	2.3179025	20	—	—
340043	2005	UH ₅₀₈	16.9	X	176.16172	193.43723	80.41571	7.85756	0.0985005	0.27939729	2.3173302	20	—	—
340044	2005	UO ₅₀₈	17.3	X	310.67905	66.51888	319.57624	1.39308	0.2147579	0.25397054	2.4695272	20	9 13.8	19.2
340045	2005	UP ₅₀₉	17.9	X	60.40571	197.44922	246.44227	1.65503	0.1113977	0.29186333	2.2508663	20	1 7.8	19.9
340046	2005	UY ₅₁₃	16.9	X	200.03590	207.28621	50.87586	7.19130	0.0898661	0.27836195	2.3230727	20	—	—
340047	2005	UP ₅₃₀	17.5	X	6.11160	303.80400	112.47109	2.23692	0.1675239	0.27332623	2.3515191	20	—	—
340048	2005	VT ₅	19.0	X	9.01294	319.41244	221.84479	19.53850	0.2609621	0.56452359	1.4499332	20	—	—
340049	2005	VK ₁₅	17.5	X	45.92613	98.02501	294.60493	0.99717	0.2173131	0.27729898	2.3220056	20	—	—
340050	2005	VL ₁₆	17.0	X	71.03091	336.35343	61.39639	8.24821	0.0832333	0.28333556	2.2958068	20	—	—
340051	2005	VK ₂₀	17.6	X	100.62774	152.32824	138.12147	2.61460	0.2065125	0.27248703	2.3563447	20	12 27.0	21.3
340052	2005	VC ₂₃	16.9	X	94.05321	234.32626	67.15691	5.04090	0.1201387	0.27214767	2.3583032	20	12 31.0	20.3
340053	2005	VB ₂₄	17.4	X	116.29953	77.49879	233.17264	6.08295	0.1226419	0.27661047	2.3328687	20	—	—
340054	2005	VT ₂₄	18.0	X	323.49111	267.64020	230.85700	6.56217	0.0604854	0.27969149	2.3157049	20	—	—
340055	2005	VX ₂₉	17.6	X	297.02785	71.67431	88.82766	2.85948	0.1496370	0.27459327	2.3442799	20	—	—
340056	2005	VG ₃₀	17.6	X	51.42820	149.17821	207.94553	3.94083	0.2457342	0.27312320	2.3526843	20	—	—
340057	2005	VP ₃₁	17.8	X	102.67882	222.16402	78.45766	3.71940	0.1737814	0.27105687	2.3646259	20	—	—
340058	2005	VY ₃₂	17.2	X	59.27076	151.63099	221.92953	4.55466	0.2419052	0.27669837	2.3323747	20	—	—
340059	2005	VX ₃₃	17.0	X	48.89530	333.90919	79.82474	7.41574	0.0898594	0.27945553	2.3170082	20	—	—
340060	2005	VA ₄₀	17.6	X	3.67102	349.38066	107.17976	6.96656	0.0897530	0.27975356	2.3153623	20	—	—
340061	2005	VE ₄₀	18.1	X	333.84765	293.36681	230.58668	2.69134	0.1413393	0.28557398	2.2837941	20	—	—
340062	2005	VX ₄₁	17.6	X	352.60508	320.01706	118.15590	2.54637	0.2701444	0.27337460	2.3512417	20	—	—
340063	2005	VK ₄₇	17.6	X	39.68705	186.24457	188.00457	2.02806	0.2172585	0.27444795	2.3451073	20	—	—
340064	2005	VH ₅₁	18.0	X	31.17601	241.50345	172.72240	5.61725	0.2310210	0.27827516	2.3235557	20	—	—
340065	2005	VC ₅₆	17.5	X	73.27806	286.83663	85.10470	5.26329	0.1380458	0.27928138	2.3179714	20	—	—
340066	2005	VD ₅₆	15.0	X	216.30380	318.14483	200.65234	9.14863	0.1732591	0.12468341	3.9682309	20	10 10.8	21.1
340067	2005	VB ₆₇	17.5	X	26.05594	153.68497	237.56682	6.34209	0.1230946	0.27323621	2.3520355	20	—	—
340068	2005	VV ₇₁	17.7	X	324.77614	333.43533	113.85040	2.26115	0.1599507	0.26871586	2.3783395	20	—	—
340069	2005	VW ₇₈	17.1	X	56.27037	150.97580	258.45635	5.43776	0.2665841	0.28054242	2.3110199	20	—	—
340070	2005	VH ₈₁	17.8	X	328.29643	199.37666	229.57914	0.58420	0.1365217	0.26608193	2.3940091	20	—	—
340071	2005	Vanmunster	17.4	X	57.58152	211.19576	141.07875	5.17217	0.1425753	0.27369904	2.3493832	20	—	—
340072	2005	VO ₁₀₇	18.0	X	320.93625	180.24966	296.32818	2.55243	0.1547					

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
340081	2005	WC ₂₅	17.2	X	215.83469	259.60605	278.91262	4.20299	0.0981271	0.26345422	2.4099014	20	12 4.5	20.4
340082	2005	WF ₂₆	15.7	X	299.29970	72.96141	4.08571	2.58896	0.1930963	0.12564821	3.9478912	20	10 7.1	20.7
340083	2005	WK ₂₇	17.6	X	283.73665	160.63568	332.63523	0.88468	0.1383215	0.26706686	2.3881195	20	—	—
340084	2005	WR ₂₈	17.8	X	114.84397	271.54015	38.79666	3.70806	0.1110836	0.27365091	2.3496587	20	—	—
340085	2005	WZ ₂₈	17.8	X	309.50380	99.03028	11.26748	1.71231	0.1640497	0.26840067	2.3802011	20	—	—
340086	2005	WL ₃₃	14.6	X	293.41189	21.48787	67.88745	11.12223	0.2272008	0.12479695	3.9658238	20	10 13.4	19.7
340087	2005	WE ₃₈	17.6	X	36.86624	303.88816	98.00885	2.44791	0.1953780	0.27488827	2.3426024	20	—	—
340088	2005	WV ₃₉	17.6	X	240.46106	89.95004	96.12543	2.51556	0.1309727	0.26289176	2.4133375	20	12 6.5	20.6
340089	2005	WZ ₄₂	17.2	X	45.42279	113.06606	266.49339	3.54247	0.2412774	0.27405573	2.3473443	20	—	—
340090	2005	WW ₄₇	17.6	X	183.23660	147.05830	39.42341	1.74712	0.1243567	0.25807873	2.4432500	20	11 3.6	21.2
340091	2005	WZ ₄₇	17.1	X	307.21726	67.85335	62.53156	6.66999	0.0429396	0.27249461	2.3563010	20	—	—
340092	2005	WK ₅₅	17.8	X	77.37835	321.89425	40.28822	0.46464	0.2356402	0.27794398	2.3254011	20	—	—
340093	2005	WR ₅₆	17.0	X	192.39614	272.65533	90.17482	4.74848	0.2522560	0.29967078	2.2115994	20	3 19.6	20.8
340094	2005	WM ₆₇	17.7	X	8.23019	203.03936	237.13128	4.31822	0.2030882	0.27512747	2.3412444	20	—	—
340095	2005	WY ₇₀	17.3	X	301.97836	76.67143	53.41600	6.00703	0.1791638	0.26937940	2.3744323	20	—	—
340096	2005	WS ₇₃	16.8	X	303.50250	91.58117	53.58162	7.49760	0.0520014	0.27532963	2.3400982	20	—	—
340097	2005	WE ₇₅	17.7	X	286.32787	170.54822	333.92634	2.37165	0.1082200	0.27205487	2.3588394	20	—	—
340098	2005	WQ ₉₆	18.0	X	48.59880	272.69462	108.23212	2.39084	0.1934355	0.27369346	2.3494152	20	—	—
340099	2005	WV ₁₀₀	17.1	X	35.76545	324.13691	82.62686	3.15133	0.2261276	0.27605058	2.3360221	20	—	—
340100	2005	WO ₁₀₅	17.3	X	336.76430	354.81651	74.86214	5.22529	0.2263387	0.26686216	2.3893405	20	—	—
340101	2005	WO ₁₀₈	17.4	X	320.68585	358.11269	89.61878	2.39821	0.1434624	0.26728556	2.3868166	20	—	—
340102	2005	WS ₁₀₉	15.2	X	290.32100	221.55185	232.54736	1.83766	0.2130313	0.12584761	3.9437201	20	10 11.4	20.2
340103	2005	WY ₁₁₆	17.1	X	327.63431	15.58639	107.51677	5.91281	0.1574064	0.27279229	2.3545865	20	—	—
340104	2005	WR ₁₁₇	17.9	X	5.83831	94.12499	8.00809	4.69618	0.1841982	0.27776895	2.3263779	20	—	—
340105	2005	WC ₁₁₈	17.4	X	19.44840	40.55096	25.70776	5.73571	0.1851246	0.27610313	2.3357257	20	—	—
340106	2005	WV ₁₂₀	18.1	X	27.02154	200.70942	214.76825	0.81357	0.1843125	0.27546298	2.3393429	20	—	—
340107	2005	WY ₁₂₈	15.7	X	285.84294	27.48399	63.98029	0.21964	0.2125527	0.12550418	3.9509110	20	10 2.6	20.9
340108	2005	WY ₁₃₉	17.7	X	221.82914	92.57913	52.11938	2.35476	0.1218490	0.25660900	2.4525703	20	10 24.5	21.0
340109	2005	WC ₁₄₇	17.3	X	79.36559	227.54303	62.67726	4.86392	0.0778199	0.26106631	2.4245743	20	11 24.9	20.6
340110	2005	WO ₁₄₇	17.3	X	82.64654	238.68242	147.14936	6.54182	0.1329080	0.28195049	2.3033193	20	—	—
340111	2005	WZ ₁₅₅	15.2	X	284.58776	292.57187	162.87165	9.90283	0.2572293	0.12490299	3.9635787	20	9 30.7	20.4
340112	2005	WY ₁₆₄	16.7	X	67.93572	22.82742	264.93479	3.20823	0.1395561	0.26160917	2.4212190	20	11 15.3	20.2
340113	2005	WM ₁₆₈	16.9	X	239.56709	62.76645	91.48747	6.15153	0.1000381	0.26198148	2.4189246	20	12 3.9	19.9
340114	2005	WV ₁₇₀	16.8	X	157.91609	162.07056	83.24223	8.35000	0.0730671	0.26444615	2.4038713	20	12 25.7	20.2
340115	2005	WE ₁₇₆	18.1	X	53.58794	68.14428	302.63339	3.68166	0.2172090	0.27190377	2.3597133	20	—	—
340116	2005	WF ₁₉₂	17.3	X	343.80033	354.64767	134.89685	7.23187	0.1806827	0.27773929	2.3265434	20	—	—
340117	2005	WT ₁₉₂	17.0	X	59.10387	60.96669	356.40583	8.03108	0.1559067	0.28209519	2.3025316	20	—	—
340118	2005	WY ₁₉₂	17.2	X	315.09857	319.65323	148.56248	4.61226	0.2099439	0.26969065	2.3726051	20	—	—
340119	2005	WO ₁₉₃	17.7	X	9.65416	50.79324	26.39309	3.50689	0.2020949	0.27409714	2.3471079	20	—	—
340120	2005	WL ₁₉₇	17.7	X	302.45667	154.51510	318.85052	1.53014	0.1411016	0.26757278	2.3851082	20	—	—
340121	2005	WY ₁₉₉	15.1	X	281.23930	203.42610	260.85983	7.92548	0.1297666	0.12427908	3.9768331	20	10 20.3	20.5
340122	2005	WG ₂₀₁	17.5	X	326.44248	185.49344	281.87886	5.41285	0.0721241	0.27140860	2.3625825	20	—	—
340123	2005	WY ₂₀₇	17.6	X	359.41710	202.29671	208.40623	0.83826	0.1804097	0.26332293	2.4107024	20	—	—
340124	2005	XD ₃	17.2	X	318.25112	39.98378	78.79079	6.30746	0.1810142	0.27086745	2.3657281	20	—	—
340125	2005	XH ₅	15.2	X	312.27333	303.47287	331.12870	32.92463	0.2476828	0.21342210	2.7731698	20	3 10.4	19.3
340126	2005	XQ ₁₆	17.8	X	12.03208	320.69401	92.22920	4.15185	0.1657324	0.26985026	2.3716694	20	—	—
340127	2005	XG ₁₈	17.2	X	241.84888	24.09783	111.68209	3.38909	0.1468364	0.25640212	2.4538893	20	11 4.5	20.3
340128	2005	XX ₂₈	17.5	X	280.49284	132.36002	303.04194	2.01492	0.1506311	0.25811666	2.4430106	20	10 7.5	20.2
340129	2005	XL ₃₆	17.8	X	339.99470	359.26559	62.24695	2.25062	0.1709557	0.26522970	2.3991346	20	—	—
340130	2005	XK ₄₁	18.3	X	339.48940	95.75974	350.92888	2.98697	0.1922205	0.26868030	2.3785494	20	—	—
340131	2005	XY ₅₁	17.9	X	357.42514	68.02222	33.10028	3.06223	0.1645048	0.27342573	2.3509486	20	—	—
340132	2005	XT ₇₃	17.0	X	270.19482	78.27291	355.95826	4.00568	0.1310362	0.25308619	2.4752767	20	9 21.8	19.8
340133	2005	XD ₈₂	17.5	X	77.91889	212.78337	105.34166	3.59085	0.1979980	0.26789679	2.3831847	20	—	—
340134	2005	XG ₈₄	16.8	X	54.80444	50.98838	345.49793	5.98057	0.1846898	0.27752440	2.3277443	20	—	—
340135	2005	XH ₁₁₇	17.2	X	142.51550	24.66312	263.18019	5.70689	0.1043188	0.27205238	2.3588538	20	—	—
340136	2005	YK ₆	16.6	X	341.29672	120.78577	304.65299	10.11521	0.1474961	0.26754041	2.3853007	20	—	—
340137	2005	YS ₁₃	17.3	X	76.87876	31.55308	291.23964	5.43900	0.1006680	0.26037575	2.4288593	20	—	—
340138	2005	YK ₂₄	16.9	X	262.43867	9.28239	105.41189	8.62856	0.1415760	0.25655835	2.4528930	20	11 8.6	19.8
340139	2005	YX ₂₄	17.1	X	17.54446	241.54024	104.02185	3.34439	0.2286737	0.25851631	2.4404922	20	12 11.7	19.9
340140	2005	YW ₂₅	17.7	X	238.33096	55.83275	114.13046	3.06149	0.1222364	0.25916036	2.4364472	20	12 18.7	20.5
340141	2005	YQ ₃₃	17.6	X	355.87245	284.76310	115.66132	3.23274	0.2113305	0.26435763	2.4044079	20	—	—
340142	2005	YM ₃₉	17.0	X	256.83157	136.84462	14.16134	3.44175	0.1307150	0.25983932	2.4322011	20	12 19.2	19.6
340143	2005	YV ₄₂	17.4	X	340.83608	321.10975	116.82295	5.54024	0.2065759	0.26623516	2.3930905	20	—	—
340144	2005	YJ ₄₃	16.5	X	19.17329	1.47975	109.60066	25.24066	0.1789953	0.27747916	2.3279973	20	—	—
340145	2005	YG ₅₂	16.3	X	339.76363	12.74627	285.52508	6.86833	0.2325262	0.23571753	2.5954229	20	6 27.3	18.3
340146	2005	YH ₅₂	17.7	X	308.76348	328.97446	179.68530	1.74533	0.1541577	0.26879211	2.3778897	20	—	—
340147	2005	YA ₅₄	17.9	X	341.32670	277.82013	126.79994	1.89421	0.1822407	0.26131143	2.4230578	20	12 27.4	19.9
340148	2005	YG ₆₂	14.8	X	320.73116	344.88216	80.23221	4.01182	0.1991206	0.12453853	3.9713079	20	10 28.6	19.3
340149	2005	YL ₆₃	16.9	X	276.66363	150.14026	287.25929	5.62594	0.1158286	0.25428483	2.4674920	20	10 6.1	19.9
340150	2005	YB ₇₁	17.2	X	122.85860	15.20399	264.29699	2.30184	0.0958147	0.25866681	2.4395455	20	12 29.1	20.6
340151	2005	YX ₇₃	17.1	X	311.39819	190.17421	296.23548	6.62463	0.0403826	0.26870				

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340161 2005 YE ₁₁₄	17.2	X	7.70805	343.99429	26.58483	3.06707	0.1877150	0.26016251	2.4301863	20	12 24.9	20.0
340162 2005 YD ₁₂₀	16.6	X	98.51717	83.77290	120.92463	5.39862	0.0991201	0.23997664	2.5646222	20	8 27.9	20.3
340163 2005 YO ₁₃₃	16.8	X	13.43616	53.18673	300.16029	7.13766	0.1246889	0.25895563	2.4377312	20	11 28.4	19.7
340164 2005 YY ₁₃₈	16.3	X	28.18034	338.16633	296.08122	12.38192	0.1502820	0.23985434	2.5654940	20	8 27.6	19.4
340165 2005 YS ₁₄₀	18.0	X	17.46144	103.41681	305.22481	4.25642	0.2262578	0.26984328	2.3717103	20	—	—
340166 2005 YM ₁₄₄	18.4	X	310.93506	141.96296	336.92873	2.09760	0.1512304	0.26450570	2.4035105	20	—	—
340167 2005 YE ₁₄₆	17.2	X	63.06306	252.06437	83.03242	6.51972	0.1827214	0.26336338	2.4104555	20	—	—
340168 2005 YA ₁₄₈	17.1	X	308.76000	72.04324	353.75448	2.65902	0.1589648	0.25811410	2.4430268	20	11 17.2	19.1
340169 2005 YH ₁₅₁	17.6	X	299.75220	64.71614	351.21121	2.50855	0.1845842	0.26066885	2.4270383	20	12 21.3	19.4
340170 2005 YT ₁₅₁	17.3	X	256.16905	92.49289	33.68950	2.62073	0.1488843	0.25668341	2.4520963	20	11 9.9	20.0
340171 2005 YU ₁₅₃	16.9	X	306.23383	152.09579	314.56657	9.23658	0.1619826	0.26270316	2.4144925	20	—	—
340172 2005 YJ ₁₆₆	16.4	X	204.36634	44.01098	138.25560	6.80877	0.0702766	0.25691102	2.4506477	20	11 29.4	19.7
340173 2005 YD ₁₇₃	16.8	X	305.22923	172.76955	297.28458	7.98109	0.1876638	0.26594948	2.3948038	20	—	—
340174 2005 YT ₁₇₆	16.5	X	34.33207	336.90569	295.23974	3.90727	0.1409767	0.24084235	2.5584729	20	9 6.2	19.6
340175 2005 YK ₁₇₈	16.9	X	217.96195	6.27948	160.43572	2.60940	0.1421180	0.25480964	2.4641027	20	11 14.9	20.3
340176 2005 YL ₁₈₂	17.7	X	332.41579	326.45693	128.48324	9.56223	0.2312680	0.26702547	2.3883662	20	—	—
340177 2005 YM ₁₈₂	16.2	X	103.31195	249.72084	270.92228	12.44560	0.1986084	0.23075068	2.6325344	20	7 13.8	20.2
340178 2005 YS ₁₈₂	16.5	X	254.05075	57.03551	111.30388	9.76979	0.1416738	0.26358895	2.4090802	20	—	—
340179 2005 YN ₁₈₈	18.4	X	288.29684	70.80402	36.58298	1.69405	0.1484259	0.25861273	2.4398855	20	12 9.7	20.5
340180 2005 YQ ₁₈₈	17.1	X	8.25935	206.71185	104.20692	3.86665	0.1427816	0.24322399	2.5417438	20	9 22.7	19.7
340181 2005 YY ₁₈₈	17.8	X	305.49472	300.79374	131.70120	23.36709	0.0674372	0.39016403	1.8548319	20	—	—
340182 2005 YO ₁₉₂	17.2	X	329.34270	311.85104	104.41019	2.86753	0.1706477	0.25889256	2.4381271	20	12 18.4	19.1
340183 2005 YX ₁₉₂	16.6	X	172.79678	276.89844	309.43928	5.46960	0.0930320	0.25565994	2.4586361	20	12 14.7	20.2
340184 2005 YN ₁₉₆	15.8	X	327.31081	334.20504	80.42816	2.39897	0.2099344	0.12573297	3.9461167	20	10 26.8	20.3
340185 2005 YT ₂₀₃	17.6	X	56.32001	76.84380	273.42066	1.01023	0.1635489	0.26430888	2.4047036	20	—	—
340186 2005 YX ₂₀₆	18.1	X	347.41069	150.53806	258.48138	1.33610	0.1772092	0.26212968	2.4180127	20	—	—
340187 2005 YE ₂₁₉	16.4	X	69.18644	32.14620	285.71838	8.39478	0.2343092	0.26502251	2.4003848	20	—	—
340188 2005 YJ ₂₃₀	17.4	X	247.79262	85.23664	81.30548	3.57280	0.1394067	0.26114250	2.4241027	20	12 25.8	20.2
340189 2005 YP ₂₃₀	17.0	X	28.54218	222.82117	96.60883	7.80586	0.1527239	0.25194444	2.4827493	20	11 10.8	20.0
340190 2005 YT ₂₄₀	17.5	X	31.96980	348.31745	9.23390	3.19205	0.2030804	0.26120427	2.4237205	20	—	—
340191 2005 YS ₂₆₆	17.7	X	18.95365	112.18009	272.52372	2.26232	0.1061279	0.26509163	2.3999675	20	—	—
340192 2005 YP ₂₆₇	17.7	X	30.95865	64.90903	294.09031	5.66873	0.1869093	0.26113952	2.4241211	20	—	—
340193 2005 YB ₂₆₈	16.1	X	335.44062	356.14838	295.42237	15.50638	0.1538198	0.23240349	2.6200382	20	6 13.8	18.9
340194 2005 YE ₂₇₁	17.5	X	287.74210	321.96529	136.60500	5.16325	0.0778839	0.25724751	2.4485103	20	12 2.9	20.3
340195 2005 YA ₂₇₅	16.8	X	324.49027	231.81442	233.93487	8.82849	0.1216931	0.26335374	2.4105143	20	—	—
340196 2005 YX ₂₇₅	17.4	X	352.56598	2.69700	81.74086	3.32274	0.1817658	0.27108478	2.3644636	20	—	—
340197 2005 YL ₂₉₀	17.6	X	168.53457	198.66230	308.77675	0.41821	0.0200726	0.24220880	2.5488412	20	8 30.9	20.8
340198 2005 YV ₂₉₁	17.1	X	235.37342	342.26463	155.87258	6.22983	0.0734480	0.25328606	2.4739743	20	11 10.3	20.3
340199 2006 AQ ₅	16.8	X	304.42148	50.67395	53.91497	11.43081	0.1997939	0.26120619	2.4237086	20	—	—
340200 2006 AL ₉	17.2	X	57.99565	121.46461	229.88561	5.33947	0.1513229	0.26498354	2.4006202	20	—	—
340201 2006 AB ₁₅	16.9	X	337.48452	53.21066	300.88877	13.38161	0.0863670	0.24650609	2.5191322	20	9 16.0	20.1
340202 2006 AZ ₁₅	17.0	X	35.20217	70.96272	289.10119	6.05508	0.2435750	0.26454020	2.4033015	20	—	—
340203 2006 AR ₁₉	18.1	X	333.76319	108.18747	353.76277	1.36386	0.1552253	0.26852856	2.3794453	20	—	—
340204 2006 AD ₃₃	16.5	X	58.74687	359.82955	337.77817	4.73874	0.2446146	0.26545593	2.3977713	20	—	—
340205 2006 AE ₃₃	16.2	X	190.46905	260.45737	302.30150	9.99361	0.1154822	0.25735882	2.4478042	20	12 1.6	19.8
340206 2006 AF ₃₃	17.8	X	303.09791	61.87132	65.44252	5.64205	0.1966904	0.26569584	2.3963277	20	—	—
340207 2006 AA ₃₄	17.6	X	312.92910	100.42062	349.03784	8.03172	0.2331264	0.26205775	2.4184552	20	—	—
340208 2006 AA ₄₀	16.5	X	28.04519	292.99575	308.79480	10.67940	0.0929579	0.23086818	2.6316411	20	7 8.7	19.6
340209 2006 AY ₅₂	18.3	X	341.12932	225.10412	118.37594	1.89432	0.1730172	0.26613369	2.3936986	20	—	—
340210 2006 AU ₅₄	18.0	X	7.54490	166.15434	215.76376	3.02204	0.2332276	0.26229913	2.4169712	20	—	—
340211 2006 AR ₆₁	18.1	X	309.54008	262.86349	171.21958	2.41973	0.1789531	0.25881389	2.4386211	20	12 3.1	20.0
340212 2006 AB ₆₉	17.0	X	347.63955	335.03542	35.44762	3.17436	0.1950059	0.25601690	2.4563503	20	11 18.4	19.0
340213 2006 AK ₇₂	16.8	X	195.98495	66.46790	129.66664	6.84776	0.0936689	0.25515887	2.4618539	20	12 3.6	20.3
340214 2006 AV ₇₄	16.2	X	133.02056	210.33645	31.73066	7.02801	0.1011346	0.25269869	2.4778065	20	11 20.8	19.9
340215 2006 AO ₈₄	15.2	X	343.11561	5.61999	46.24119	9.34068	0.3048504	0.12616271	3.9371507	20	11 23.9	19.0
340216 2006 AA ₉₃	17.3	X	357.16732	326.70534	324.49704	3.38204	0.1866941	0.23659079	2.5890324	20	8 1.1	19.3
340217 2006 AJ ₉₆	16.3	X	129.46585	146.52004	37.21999	13.69534	0.0884645	0.24064194	2.5598932	20	9 9.9	20.3
340218 2006 AP ₉₈	15.9	X	146.79801	350.62890	149.96935	33.77547	0.1539244	0.23128309	2.6284928	20	7 29.3	20.5
340219 2006 AQ ₁₀₅	17.4	X	251.75616	199.51417	318.66170	4.23985	0.1416142	0.25709478	2.4494799	20	12 18.7	20.1
340220 2006 BP	16.2	X	165.64267	206.86455	318.83126	12.51138	0.0903540	0.24183415	2.5514729	20	9 13.9	20.2
340221 2006 BV ₁₁	17.3	X	257.93272	2.57154	118.66062	2.44876	0.1381486	0.25516157	2.4618365	20	11 8.4	20.0
340222 2006 BM ₂₄	17.7	X	349.29608	284.43010	147.19010	2.57552	0.0974835	0.26417911	2.4054910	20	—	—
340223 2006 BS ₃₂	16.6	X	63.11668	92.14549	138.91459	5.65714	0.0654839	0.23151032	2.6267726	20	8 10.7	19.8
340224 2006 BY ₅₀	14.8	X	313.25599	161.35279	269.63434	1.58674	0.2066637	0.12554828	3.9499859	20	10 2.2	19.4
340225 2006 BR ₅₄	17.9	X	330.99178	98.17675	334.23190	3.42950	0.1603423	0.25793071	2.4441847	20	—	—
340226 2006 BV ₆₀	16.4	X	316.38752	66.81223	115.74133	24.48027	0.2528769	0.27302192	2.3532661	20	—	—
340227 2006 BZ ₆₂	16.4	X	180.54158	333.94019	140.68226	15.20585	0.0555719	0.23542532	2.5975701	20	7 30.4	20.0
340228 2006 BZ ₆₅	17.2	X	8.08069	38.51059	340.36221	4.79927	0.1199786	0.25730726	2.4481312	20	12 25.3	20.1
340229 2006 BS ₆₈	17.8	X	351.29991	307.65189	103.66309	2.97028	0.2129131	0.26271868	2.4143974	20	—	—
340230 2006 BN ₇₂	17.0	X	107.50410	223.91685	341.34099	8.50269	0.1029977	0.23776608	2.5804936	20	9 6.6	20.8
340231 2006 BH ₇₄	17.5	X	221.78115	127.86345	54.44672	3.41953	0.0984677	0.25601663	2.4563520	20	12 15.3	20.7
340232 2006 BP ₇₇	16.9	X	0.10555	279.85932	158.62728	11.79241	0.2606503	0.26850237	2.3796000	20	—	—
340233 2006 BM ₈₀	16.3	X	22.83468	134.71212	103.53746	7.15675	0.0616534	0.22481931	2.6786356	20	6 20.5	19.4
340234 2006 BH ₈₁	16.5	X	12.25263	235.38871	1.23632	7.84390	0.0856589	0.22232618	2.6986236			

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340241 2006 BK ₉₃	17.2	X	63.59195	229.86069	348.06573	4.73847	0.1368272	0.22811813	2.6527491	20	8 5.6	20.6
340242 2006 BB ₁₀₀	16.7	X	312.42686	344.76273	54.75051	8.51765	0.2373136	0.25347735	2.4727295	20	10 13.0	18.4
340243 2006 BZ ₁₀₉	17.2	X	341.07865	23.20874	7.27368	2.51732	0.1966980	0.25559732	2.4590377	20	12 5.1	19.4
340244 2006 BR ₁₁₅	16.8	X	43.09085	353.53826	251.45438	1.86679	0.0443106	0.23228718	2.6209127	20	7 28.6	20.2
340245 2006 BW ₁₁₅	16.5	X	289.21729	36.31843	266.09540	1.75257	0.0736601	0.22185037	2.7024807	20	4 24.7	20.0
340246 2006 BU ₁₁₇	17.3	X	359.07687	72.78552	337.43391	4.79941	0.2223533	0.26448105	2.4036598	20	—	—
340247 2006 BP ₁₁₈	16.5	X	56.30318	101.72993	203.19760	2.46675	0.1283647	0.24566475	2.5248804	20	11 20.3	19.8
340248 2006 BB ₁₂₁	16.5	X	280.74992	38.44147	317.99381	14.63159	0.1547329	0.23293400	2.6160585	20	6 13.7	20.2
340249 2006 BG ₁₂₃	17.0	X	105.59807	245.72821	328.63770	3.68103	0.0526919	0.23779597	2.5802774	20	9 10.8	20.5
340250 2006 BK ₁₂₄	17.6	X	257.40604	118.92751	331.98694	10.60460	0.1330304	0.24678460	2.5172365	20	9 21.2	20.8
340251 2006 BB ₁₂₈	16.4	X	359.88218	157.87152	156.74777	12.49567	0.1957325	0.23622168	2.5917287	20	9 15.9	18.7
340252 2006 BB ₁₃₀	17.2	X	291.58762	303.10143	158.29158	6.53980	0.0925328	0.25403773	2.4690918	20	12 10.8	19.9
340253 2006 BJ ₁₃₁	17.7	X	262.24898	353.60017	95.81313	0.91842	0.0546833	0.24567937	2.5247803	20	10 12.4	20.8
340254 2006 BL ₁₃₃	16.4	X	134.78521	228.92394	322.76960	8.81526	0.1408107	0.23761880	2.5815598	20	9 17.3	20.6
340255 2006 BK ₁₃₆	17.9	X	292.22470	116.88807	16.56597	1.64629	0.1292997	0.26256887	2.4153156	20	—	—
340256 2006 BW ₁₃₉	16.9	X	350.09225	38.61163	340.35823	6.42956	0.1336566	0.25652867	2.4530823	20	11 26.3	19.6
340257 2006 BU ₁₄₂	16.7	X	17.83624	147.43298	146.98295	9.19673	0.0685287	0.23565427	2.5958873	20	9 3.1	19.7
340258 2006 BF ₁₄₈	18.1	X	311.52829	139.25501	343.00784	24.03987	0.0609773	0.40150393	1.8197407	20	—	—
340259 2006 BG ₁₅₁	16.8	X	71.38192	262.14373	65.53214	3.30464	0.0563156	0.25652315	2.4531175	20	12 30.4	20.0
340260 2006 BY ₁₅₃	16.4	X	120.15356	287.78036	287.01011	12.29518	0.1127433	0.24147061	2.5540331	20	9 27.0	20.6
340261 2006 BY ₁₅₅	16.5	X	327.33729	198.02076	145.06776	5.65628	0.2496746	0.23831512	2.5765287	20	8 7.5	18.4
340262 2006 BH ₁₅₆	12.8	X	48.39391	202.92764	348.69820	14.29308	0.0635755	0.08308476	5.2014187	20	5 22.6	19.7
340263 2006 BX ₁₅₇	16.5	X	355.12247	195.01405	148.76025	8.59228	0.1352029	0.24110334	2.5566262	20	10 16.5	19.2
340264 2006 BU ₁₅₈	16.2	X	326.60841	340.42031	339.55517	9.37687	0.1244715	0.23209361	2.6223697	20	7 14.1	19.1
340265 2006 BO ₁₆₁	15.6	X	111.99813	241.31560	290.54095	14.14199	0.0280930	0.23115276	2.6294808	20	7 19.9	19.3
340266 2006 BM ₁₆₃	17.6	X	263.03296	344.03920	138.49917	5.26462	0.0577333	0.25414616	2.4683895	20	11 29.6	20.6
340267 2006 BW ₁₇₂	17.0	X	83.05544	358.90814	256.91081	2.46442	0.1237653	0.24411785	2.5355355	20	10 16.9	20.7
340268 2006 BY ₁₇₈	17.2	X	251.11833	147.84537	11.43454	2.75581	0.0968521	0.25954618	2.4340320	20	12 26.9	20.1
340269 2006 BW ₁₈₁	17.8	X	359.51973	38.87326	34.00501	0.96926	0.1780217	0.26519344	2.3993533	20	—	—
340270 2006 BL ₁₈₃	15.5	X	326.65524	142.84973	299.11431	8.32175	0.2922533	0.12544971	3.9520546	20	11 21.0	19.5
340271 2006 BY ₁₈₄	17.2	X	335.83010	263.34684	60.16479	2.28816	0.2095370	0.23880708	2.5729889	20	8 1.9	19.1
340272 2006 BO ₁₉₀	16.9	X	63.80836	229.96831	346.99528	9.07695	0.0749201	0.22902415	2.6457484	20	7 27.1	20.4
340273 2006 BP ₁₉₃	17.3	X	29.84333	93.36417	172.59285	3.29160	0.1100789	0.23336340	2.6128485	20	8 16.3	20.4
340274 2006 BU ₁₉₅	17.2	X	343.08240	123.56853	295.85128	4.73020	0.0827245	0.25758257	2.4463865	20	—	—
340275 2006 BY ₂₁₂	16.8	X	212.46026	310.61839	142.46784	13.95643	0.1217608	0.23814551	2.5777519	20	8 3.2	20.6
340276 2006 BD ₂₁₇	16.9	X	197.94062	218.07071	348.67948	4.48306	0.0320307	0.25938615	2.4350330	20	12 27.7	20.0
340277 2006 BC ₂₂₃	16.4	X	59.06996	323.07576	321.51028	13.87648	0.1088348	0.24332821	2.5410180	20	10 17.2	20.2
340278 2006 BK ₂₂₃	17.6	X	349.73458	283.71291	155.36549	1.81783	0.1487432	0.26411748	2.4058651	20	—	—
340279 2006 BY ₂₂₈	17.9	X	353.34217	4.92948	19.14844	2.72796	0.1951352	0.25754801	2.4466054	20	12 20.4	20.2
340280 2006 BA ₂₂₉	17.0	X	32.58708	278.99107	350.23481	4.40532	0.1500055	0.23622001	2.5917410	20	9 2.3	19.9
340281 2006 BL ₂₃₃	17.4	X	236.61163	90.74346	8.53816	2.22641	0.0917434	0.24620447	2.5211892	20	9 14.9	20.8
340282 2006 BD ₂₆₁	16.2	X	318.45058	353.80938	338.49874	7.33886	0.2007055	0.23330284	2.6133006	20	7 6.4	18.8
340283 2006 BG ₂₆₅	16.6	X	318.91836	17.64226	340.16014	1.02978	0.1154741	0.23824439	2.5770386	20	8 24.9	19.3
340284 2006 BE ₂₆₉	16.1	X	157.15476	105.02479	47.48701	10.55416	0.0759618	0.23806797	2.5783116	20	8 28.7	20.1
340285 2006 BZ ₂₇₀	17.0	X	289.75726	23.61426	121.88410	2.51061	0.1512685	0.26213530	2.4179782	20	—	—
340286 2006 BX ₂₇₃	16.8	X	129.08268	107.30873	46.26685	3.16077	0.1049121	0.23139078	2.6276772	20	7 25.7	20.7
340287 2006 BY ₂₇₇	17.1	X	30.70101	246.10848	26.56891	2.21394	0.1602431	0.23616469	2.5921457	20	9 6.2	20.0
340288 2006 BD ₂₇₉	13.9	X	256.62505	319.95623	17.09575	1.73728	0.0901879	0.08217618	5.2396879	20	5 1.6	20.8
340289 2006 BB ₂₈₀	13.7	X	263.75000	206.00825	126.81751	12.13435	0.1063337	0.08456294	5.1406257	20	5 6.9	20.8
340290 2006 BH ₂₈₂	17.3	X	358.88064	12.16271	55.93580	5.01373	0.1254548	0.26422123	2.4052354	20	—	—
340291 2006 CV	19.8	X	164.16037	284.62837	330.40278	20.20008	0.3818136	0.80340445	1.1459875	20	—	—
340292 2006 CD ₃	17.2	X	298.95236	207.82557	141.06334	3.99496	0.2048475	0.23898824	2.5716885	20	6 22.4	20.0
340293 2006 CX ₃	16.7	X	316.63226	139.24170	142.83333	11.50340	0.2248191	0.22364804	2.6879797	20	4 18.6	20.0
340294 2006 CO ₅	16.9	X	220.29326	271.03729	209.97100	4.60437	0.0932060	0.24691338	2.5163611	20	9 21.8	20.3
340295 2006 CX ₇	15.7	X	186.17890	106.97711	327.84092	21.58930	0.0474495	0.22799846	2.6536773	20	6 15.4	19.9
340296 2006 CE ₉	17.7	X	352.19320	300.27346	132.16528	20.28214	0.1384468	0.40384162	1.8127114	20	—	—
340297 2006 CU ₁₁	16.8	X	96.34752	313.76224	305.91100	1.60933	0.0841085	0.24685233	2.5167760	20	11 2.5	20.4
340298 2006 CB ₂₉	17.1	X	93.09752	0.60399	244.12057	1.43587	0.1445978	0.24104189	2.5570607	20	10 15.8	21.0
340299 2006 CS ₄₀	16.0	X	30.02875	300.12131	35.07573	4.06215	0.1287420	0.24539695	2.5267170	20	11 25.3	19.2
340300 2006 CT ₄₀	17.1	X	147.71335	79.14232	112.12240	4.51285	0.0836153	0.24015021	2.5633863	20	10 4.6	20.9
340301 2006 CP ₄₅	17.0	X	135.98309	215.89282	334.37635	7.06981	0.0098669	0.24296478	2.5435513	20	9 13.9	20.4
340302 2006 CM ₄₇	17.0	X	45.99816	134.02126	121.62826	3.71231	0.1325039	0.23486494	2.6017002	20	9 1.6	20.1
340303 2006 CO ₅₀	16.6	X	17.72780	223.03788	339.56175	7.02101	0.1965945	0.21535354	2.7565638	20	4 25.6	19.3
340304 2006 CL ₅₂	16.3	X	297.12833	335.99231	315.75879	14.35870	0.1934315	0.22198983	2.7013488	20	3 26.5	20.2
340305 2006 CF ₆₀	15.7	X	208.02362	25.12154	93.03618	16.87583	0.1103674	0.23939310	2.5687882	20	9 9.8	19.8
340306 2006 CD ₆₉	13.6	X	228.36534	206.36825	154.78613	16.53780	0.0619472	0.08201673	5.2464768	20	5 6.9	20.9
340307 2006 DJ	17.0	X	13.61267	337.50307	60.33543	6.30554	0.2246832	0.26370961	2.4083453	20	—	—
340308 2006 DH ₁	17.9	X	291.23076	272.76933	137.57131	23.98011	0.1599938	0.38283475	1.8784306	20	11 10.9	19.7
340309 2006 DD ₂	17.1	X	146.44174	192.59325	338.33326	2.38522	0.0741318	0.23776017	2.5805364	20	9 3.9	20.8
340310 2006 DR ₂	16.8	X	170.28630	195.48349	338.88209	14.15924	0.0618504	0.24272831	2.5452030	20	10 1.1	20.6
340311 2006 DY ₄	16.5	X	312.30342	116.16465	157.27082	13.26368	0.1392607	0.21621537	2.7492338	20	4 13.3	20.1
340312 2006 DK ₆	17.5	X	41.15429	244.47130	345.42012	18.96035	0.0514857	0.36642594	1.9340984	20	7 23.4	19.6
340313 2006 DV ₇	16.5	X	124.40560	344.60006	166.99673	13.59372	0.1784880	0.22799256	2.6537230	20	7 21.1	

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340321 2006 DW ₂₆	16.2	X	12.71047	180.01643	162.86858	9.61053	0.0660697	0.24292953	2.5437974	20	11 4.6	19.4
340322 2006 DM ₂₈	13.2	X	256.31691	348.52479	1.03676	22.60463	0.0729856	0.08181957	5.2549017	20	5 9.0	20.5
340323 2006 DO ₃₁	13.5	X	244.21571	2.56293	349.13488	19.15268	0.0527185	0.08145321	5.2706468	20	5 1.6	20.8
340324 2006 DV ₃₂	16.7	X	150.08945	206.03051	347.59444	11.68761	0.1132856	0.23987950	2.5653145	20	10 4.3	20.7
340325 2006 DB ₃₄	17.2	X	261.25984	289.29272	158.09229	2.30028	0.1006310	0.24293845	2.5437351	20	9 30.7	20.2
340326 2006 DN ₃₅	16.4	X	339.33209	351.66719	354.37974	14.02560	0.0972958	0.23595452	2.5936847	20	9 14.5	19.2
340327 2006 DN ₃₆	13.5	X	281.64400	150.01970	182.34352	27.91518	0.0404493	0.08116243	5.2832281	20	6 1.1	20.8
340328 2006 DX ₃₆	17.2	X	16.44975	108.55638	172.89818	2.40233	0.0318544	0.22997517	2.6384492	20	8 7.6	20.6
340329 2006 DP ₃₇	16.4	X	356.46513	256.86499	2.12529	6.06286	0.0900763	0.22061567	2.7125547	20	6 6.2	19.6
340330 2006 DU ₃₇	15.8	X	207.06305	92.24873	357.41881	21.99304	0.0561631	0.23150470	2.6268151	20	8 8.4	19.9
340331 2006 DP ₃₈	17.5	X	175.76003	177.10314	357.58013	4.62096	0.1085710	0.24309742	2.5426260	20	10 9.7	21.2
340332 2006 DT ₃₉	16.9	X	76.01968	235.88895	337.00696	8.42374	0.1455011	0.23195670	2.6234015	20	8 16.7	20.5
340333 2006 DN ₄₀	16.4	X	192.22322	176.42175	314.93285	12.25008	0.1943394	0.24013350	2.5635052	20	8 25.4	20.7
340334 2006 DK ₄₃	17.1	X	350.03220	355.94396	344.49248	8.99374	0.0396550	0.24038155	2.5617415	20	9 20.6	20.2
340335 2006 DZ ₄₄	14.0	X	291.08864	195.59949	128.79778	5.54750	0.0126422	0.08477123	5.1322017	20	6 5.8	20.8
340336 2006 DO ₄₆	16.0	X	28.42421	251.38075	348.53935	17.13829	0.2274506	0.22202584	2.7010567	20	7 30.9	19.1
340337 2006 DR ₄₇	16.5	X	333.80708	336.67395	332.94220	7.43518	0.1639710	0.22981606	2.6396669	20	7 8.1	19.2
340338 2006 DQ ₅₂	18.4	X	293.06864	132.19136	355.26590	1.19857	0.1309180	0.25885359	2.4383717	20	—	—
340339 2006 DR ₅₂	16.8	X	188.67613	125.15747	342.83734	11.65897	0.0775664	0.23465012	2.6032879	20	8 2.9	20.6
340340 2006 DG ₅₄	16.9	X	313.29039	208.28467	161.41796	4.40001	0.1141514	0.23734996	2.5835088	20	9 1.0	19.5
340341 2006 DP ₅₅	16.0	X	81.43851	299.92218	295.09263	16.55653	0.1564828	0.23343176	2.6123383	20	9 12.2	20.2
340342 2006 DD ₅₆	13.5	X	290.62266	304.60012	8.59152	13.67567	0.0774455	0.08286394	5.2106550	20	5 10.4	20.5
340343 2006 DV ₅₇	17.3	X	171.96596	336.46245	176.18429	4.75217	0.1395159	0.23789049	5.2795938	20	9 6.5	21.4
340344 2006 DQ ₅₈	16.7	X	288.95507	133.33299	176.91103	8.79448	0.1529999	0.21740075	2.7392312	20	4 25.5	20.4
340345 2006 DY ₅₈	17.8	X	278.54104	257.93375	183.91185	3.92045	0.0303380	0.24287555	2.5441742	20	10 28.3	20.8
340346 2006 DL ₆₃	15.6	X	310.32914	273.64999	346.85465	16.95005	0.2485375	0.21194861	2.7860078	20	3 4.6	19.1
340347 2006 DJ ₆₇	15.9	X	83.26245	195.34956	16.31719	12.32675	0.1358514	0.22881190	2.6473843	20	8 26.7	19.8
340348 2006 DS ₇₀	13.8	X	297.61969	322.64001	334.49816	15.03706	0.0871073	0.08259927	5.2217800	20	4 26.9	20.8
340349 2006 DT ₇₃	16.5	X	204.10806	269.49726	164.69572	22.07400	0.0634959	0.22961939	2.6411740	20	7 4.3	20.8
340350 2006 DX ₇₅	13.8	X	251.72209	225.80173	113.97767	4.33349	0.0865430	0.08197258	5.2483605	20	5 1.8	20.9
340351 2006 DH ₈₀	16.5	X	265.83478	332.32656	338.36807	4.77806	0.1569281	0.21465656	2.7625275	20	3 25.9	20.6
340352 2006 DY ₈₄	17.2	X	303.43075	161.97086	257.75538	1.86355	0.1053860	0.24728074	2.5138683	20	10 28.7	19.7
340353 2006 DP ₈₉	16.7	X	299.17761	215.71242	170.17545	12.75769	0.1870570	0.23932728	2.5692592	20	8 18.6	19.6
340354 2006 DV ₉₀	17.1	X	339.85184	131.93029	157.69605	3.06651	0.0678936	0.22364371	2.6880144	20	6 23.9	20.3
340355 2006 DM ₉₁	17.2	X	222.05366	319.41255	144.49506	2.35717	0.1338052	0.23884148	2.5727418	20	8 27.8	21.0
340356 2006 DO ₉₄	16.9	X	304.22756	56.37454	5.01032	6.59138	0.0458274	0.24374598	2.5381137	20	11 2.6	20.0
340357 2006 DP ₉₄	16.9	X	154.65198	307.11350	176.52111	2.90544	0.0449315	0.22648035	2.6655226	20	7 10.6	20.6
340358 2006 DZ ₉₄	16.7	X	359.62842	255.15143	10.77626	4.27437	0.0583369	0.22185434	2.7024485	20	6 22.3	20.0
340359 2006 DG ₉₅	17.4	X	339.66461	352.06985	1.61687	19.26296	0.0981885	0.37493255	1.9047323	20	10 22.1	19.0
340360 2006 DF ₉₈	13.1	X	254.04462	359.01044	332.75745	18.40943	0.0353376	0.08275830	5.2150882	20	4 21.1	20.3
340361 2006 DE ₁₀₆	17.4	X	247.95024	117.46502	344.29813	7.31567	0.1858565	0.24537057	2.5268982	20	9 17.4	20.9
340362 2006 DE ₁₀₉	16.5	X	313.33878	193.59468	186.19756	8.65993	0.1668570	0.23960600	2.5672663	20	9 10.5	18.9
340363 2006 DF ₁₁₆	16.5	X	289.92193	271.74055	11.63081	15.13002	0.1122562	0.21105091	2.7939024	20	3 28.1	20.3
340364 2006 DS ₁₂₄	16.6	X	331.16789	16.14133	335.34215	4.33786	0.0845120	0.23780281	2.5802278	20	9 7.4	19.6
340365 2006 DY ₁₂₄	16.0	X	61.40827	198.78387	17.64755	13.16128	0.2289684	0.22239643	2.6980553	20	8 19.5	19.9
340366 2006 DC ₁₂₆	17.4	X	311.93810	121.67655	184.70245	3.24698	0.0875127	0.22585130	2.6704697	20	6 1.3	20.6
340367 2006 DF ₁₂₉	16.8	X	339.50320	292.31664	58.32966	4.03182	0.1536943	0.24042011	2.5614676	20	9 25.9	19.2
340368 2006 DC ₁₃₅	17.2	X	311.11902	283.18681	340.60781	6.44677	0.2515149	0.21251366	2.7810672	20	3 8.2	20.8
340369 2006 DV ₁₄₀	16.7	X	306.07805	325.49666	19.95749	6.59829	0.0456176	0.23091555	2.6312812	20	7 24.9	20.1
340370 2006 DN ₁₄₃	17.0	X	118.00317	179.73972	345.69786	7.20804	0.1433928	0.23011364	2.6373907	20	8 2.3	21.0
340371 2006 DT ₁₅₂	17.1	X	31.10919	78.14225	179.86877	2.20908	0.1601429	0.22510991	2.6763299	20	8 13.6	20.1
340372 2006 DQ ₁₆₁	17.3	X	134.86749	176.62092	347.11140	2.43290	0.0515515	0.23273686	2.6175356	20	8 10.9	20.8
340373 2006 DR ₁₆₈	16.7	X	28.41974	223.84577	15.32918	8.81785	0.0991833	0.22370027	2.6875613	20	7 5.9	20.0
340374 2006 DZ ₁₈₁	16.9	X	15.23220	245.77833	11.81307	9.29883	0.1113900	0.22347065	2.6894020	20	7 11.8	20.1
340375 2006 DL ₁₈₅	16.7	X	39.49066	219.75592	11.75205	13.01910	0.2062058	0.22204479	2.7009031	20	8 3.3	20.1
340376 2006 DV ₁₈₇	18.0	X	37.65347	35.53396	56.50400	2.39658	0.1486415	0.27097910	2.3650783	20	—	—
340377 2006 DE ₁₈₉	17.1	X	272.58145	231.03789	143.96237	2.16848	0.0214375	0.22900692	2.6458811	20	7 18.6	20.6
340378 2006 DT ₁₈₉	16.4	X	304.20901	260.11950	16.62583	5.18162	0.1034636	0.21387101	2.7692879	20	4 7.7	20.0
340379 2006 DR ₁₉₀	16.3	X	241.32685	208.92239	150.96570	6.50696	0.0497304	0.21879034	2.7276206	20	5 15.4	20.2
340380 2006 DW ₁₉₂	17.1	X	168.45645	24.46729	154.30949	3.85929	0.0760588	0.23945970	2.5683119	20	10 10.3	20.7
340381 2006 DU ₁₉₇	16.0	X	184.48599	191.84212	345.23536	13.65469	0.1120676	0.24294883	2.5436626	20	10 16.8	20.1
340382 2006 DV ₁₉₇	16.4	X	73.22422	204.92733	358.91973	13.64917	0.1915777	0.22281282	2.6946928	20	8 11.0	20.3
340383 2006 DX ₂₀₃	15.9	X	52.89079	336.81705	261.13450	10.75553	0.1497491	0.22905019	2.6455478	20	8 13.9	19.5
340384 2006 DL ₂₀₇	16.7	X	300.51193	161.63717	219.19215	4.17563	0.0834959	0.23592878	2.5938733	20	8 27.4	19.9
340385 2006 DB ₂₀₉	16.7	X	160.99676	324.87154	159.78528	7.82937	0.0471460	0.23031139	2.6358809	20	7 19.5	20.6
340386 2006 EU ₁	16.9	X	331.85198	283.04588	4.98419	8.32894	0.0785754	0.22395830	2.6854966	20	6 6.4	20.3
340387 2006 ES ₄	17.0	X	335.46447	265.88414	119.67751	3.85698	0.1394784	0.24789412	2.5097198	20	11 10.0	19.4
340388 2006 EK ₁₃	18.1	X	334.48054	145.58034	292.81328	0.47928	0.1641909	0.25787780	2.4445189	20	—	—
340389 2006 EQ ₁₄	16.8	X	285.65869	62.36018	354.49241	6.57918	0.0908950	0.24161396	2.5530228	20	9 25.1	19.8
340390 2006 EF ₁₅	16.8	X	214.26398	93.22820	359.21047	11.78922	0.0670078	0.23406723	2.6076080	20	8 14.5	20.6
340391 2006 ER ₁₅	16.6	X	323.24247	221.49646	163.06268	3.30726	0.1079472	0.24145256	2.5541604	20	10 13.4	19.2
340392 2006 EC ₁₇	16.7	X	312.67291	176.91090	137.78080	2.96433	0.0811466	0.22242817	2.6977986	20	6 14.7	20.0
340393 2006 EF ₁₇	16.9	X	14.71443	223.61943	0.67102	3.10951	0.13					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340401 2006 EU ₃₅	17.3	X	327.22831	299.62879	121.84578	4.09043	0.1615015	0.25461692	2.4653460	20	12 19.4	19.4
340402 2006 EV ₄₈	16.6	X	300.98121	282.56287	3.61579	8.77106	0.1992325	0.21542118	2.7559867	20	3 31.1	20.3
340403 2006 EQ ₅₄	17.5	X	148.77051	345.89082	170.75552	2.62838	0.0615073	0.23566952	2.5957754	20	8 17.8	21.3
340404 2006 EL ₆₂	15.7	X	345.93641	250.21941	343.84894	11.85835	0.0882429	0.21371232	2.7706586	20	4 10.4	19.3
340405 2006 EM ₆₃	16.8	X	31.89707	19.41279	209.21181	4.66548	0.1002711	0.22103187	2.7091483	20	6 24.9	20.0
340406 2006 ED ₆₅	16.7	X	273.31787	235.13878	189.32838	17.23263	0.1714580	0.24090431	2.5580341	20	9 1.1	20.0
340407 2006 EZ ₆₅	16.8	X	146.11512	326.89594	193.62873	6.88568	0.1276828	0.23214159	2.6220084	20	8 20.0	20.9
340408 2006 EF ₆₆	17.7	X	358.31688	92.52804	185.13729	21.63192	0.0910616	0.36281869	1.9468969	20	7 15.7	19.9
340409 2006 ES ₇₂	16.1	X	210.02411	130.41733	155.39347	11.13581	0.0525760	0.19017774	2.9947663	20	1 8.9	20.7
340410 2006 EV ₇₂	17.0	X	350.28557	212.55920	32.40866	1.92092	0.1674688	0.21416880	2.7667202	20	5 2.9	19.6
340411 2006 FC ₁	17.0	X	284.04918	52.73005	11.43351	2.58232	0.0522245	0.24253378	2.5465638	20	10 8.5	19.8
340412 2006 FY ₈	16.8	X	147.92211	88.48283	52.55242	3.95969	0.0331373	0.22578288	2.6710091	20	7 26.6	20.5
340413 2006 FS ₉	17.4	X	134.68839	344.75490	211.00592	6.84755	0.1239172	0.23935013	2.5690956	20	9 23.4	21.4
340414 2006 FE ₁₀	16.4	X	123.91388	293.36794	270.10302	8.82929	0.2241975	0.23420124	2.6066132	20	9 23.4	21.0
340415 2006 FD ₁₀	16.4	X	126.82254	277.45248	271.88789	10.43485	0.2152935	0.23328110	2.6134629	20	9 7.2	21.1
340416 2006 FZ ₁₂	16.6	X	323.70389	219.31100	45.14425	5.04521	0.1552151	0.21160924	2.7889858	20	4 14.2	19.8
340417 2006 FV ₁₃	16.9	X	250.72932	27.32264	23.78218	13.64702	0.0699818	0.22956794	2.6415686	20	8 6.0	20.7
340418 2006 FA ₁₄	16.6	X	297.01181	131.41673	190.10895	12.19178	0.1833316	0.21681313	2.7441784	20	5 16.9	20.2
340419 2006 FM ₁₆	17.0	X	275.20040	268.97041	188.52173	15.26846	0.0973262	0.24682686	2.5169491	20	11 7.7	20.1
340420 2006 FO ₁₇	16.8	X	281.61602	232.77792	44.54840	6.24943	0.0991778	0.20518525	2.8468984	20	3 14.6	20.8
340421 2006 FY ₁₈	16.4	X	2.10895	196.19997	17.79108	9.38300	0.0957337	0.21151963	2.7897734	20	4 13.6	19.5
340422 2006 FD ₂₀	15.8	X	357.42430	237.00014	28.20199	13.29889	0.1369424	0.21671868	2.7449756	20	6 16.4	19.0
340423 2006 FQ ₂₃	16.8	X	123.98854	8.26711	183.35126	7.63442	0.1279084	0.23140865	2.6275419	20	9 7.2	20.9
340424 2006 FO ₂₄	16.7	X	67.77708	19.98578	184.14419	5.99697	0.0977664	0.22187693	2.7022651	20	7 14.4	20.3
340425 2006 FA ₂₇	16.9	X	82.94349	111.05559	39.18103	4.38839	0.0375470	0.21518622	2.7579925	20	5 14.1	20.5
340426 2006 FX ₂₉	16.4	X	82.62393	183.88738	32.15431	9.07945	0.1819216	0.22572794	2.6714425	20	9 5.1	20.4
340427 2006 FZ ₂₉	16.8	X	262.86332	244.89061	201.62488	13.30178	0.1816930	0.23927718	2.5696178	20	9 14.8	20.2
340428 2006 FV ₃₁	16.2	X	35.86308	195.07142	29.91853	16.20654	0.1051825	0.21846739	2.7303080	20	6 26.7	19.8
340429 2006 FB ₃₂	16.8	X	281.28471	6.16844	29.51515	5.84941	0.0721345	0.23007964	2.6376506	20	8 24.2	20.1
340430 2006 FD ₃₂	17.1	X	312.87070	287.23399	36.77814	2.30666	0.0691581	0.22072782	2.7116357	20	6 29.6	20.5
340431 2006 FM ₃₅	17.5	X	66.47958	218.42130	15.64232	19.09242	0.0830234	0.36778211	1.9293410	20	9 17.1	19.6
340432 2006 FP ₃₈	16.9	X	8.72050	294.29672	46.61815	4.33253	0.0754474	0.23939587	2.5687684	20	10 24.9	20.0
340433 2006 FC ₄₆	16.5	X	66.51555	8.98836	199.97284	12.73085	0.1852642	0.22379382	2.6868123	20	7 30.6	20.4
340434 2006 FH ₄₆	16.3	X	60.08908	153.00889	60.90986	4.04477	0.1726344	0.22338897	2.6900575	20	7 31.6	19.7
340435 2006 FB ₅₀	15.8	X	2.36341	165.01174	74.85607	10.66903	0.1423609	0.21631346	2.7484026	20	5 22.2	18.5
340436 2006 FG ₅₄	16.6	X	229.40944	262.15479	38.76184	9.11687	0.2140388	0.19598385	2.9353227	20	2 12.6	21.7
340437 2006 FH ₅₄	16.5	X	213.92139	102.86359	26.11957	13.07755	0.1033859	0.23798071	2.5789418	20	9 27.3	20.3
340438 2006 GA ₂	16.7	X	39.75133	76.85850	151.27693	7.62024	0.1903003	0.22094862	2.7098288	20	7 20.5	19.8
340439 2006 GA ₁₆	16.9	X	180.55185	61.09835	49.09107	4.85525	0.0733941	0.22764665	2.6564106	20	7 25.4	20.8
340440 2006 GY ₁₈	16.7	X	44.65455	163.83550	48.76171	5.61748	0.0460709	0.21883438	2.7272546	20	6 15.3	20.2
340441 2006 GU ₂₁	16.5	X	275.46532	238.81898	67.64274	4.82928	0.0841974	0.21014006	2.8019700	20	4 13.7	20.3
340442 2006 GK ₂₃	16.9	X	239.02523	210.06111	179.85257	6.05656	0.0462002	0.22062526	2.7124759	20	6 19.9	20.8
340443 2006 GU ₂₃	17.0	X	326.96324	103.20196	180.47171	4.06390	0.1377283	0.21477021	2.7615528	20	5 18.9	20.2
340444 2006 GA ₂₅	17.1	X	330.11675	275.77482	32.27647	5.43803	0.1024814	0.22108988	2.7086745	20	7 2.1	20.2
340445 2006 GS ₂₆	16.4	X	356.46146	187.83110	51.03493	5.98514	0.1077766	0.21283015	2.7783094	20	5 9.2	19.6
340446 2006 GR ₃₂	17.3	X	188.91206	111.73170	64.57985	3.70251	0.1114745	0.24294449	2.5436929	20	10 27.3	21.1
340447 2006 GX ₃₄	16.9	X	115.96247	310.18656	194.43641	8.33597	0.1033250	0.22105259	2.7089790	20	6 26.9	21.0
340448 2006 GA ₃₆	16.7	X	302.63287	270.53545	20.82635	3.40925	0.0527799	0.21623423	2.7490739	20	5 1.9	20.1
340449 2006 GE ₃₉	17.0	X	239.22863	272.36078	199.12904	20.81498	0.1018234	0.37811008	1.8940461	20	11 1.6	18.5
340450 2006 GX ₃₉	16.3	X	49.50505	195.87474	36.76975	14.57660	0.2039775	0.22400871	2.6850937	20	8 23.1	20.0
340451 2006 GQ ₄₀	15.7	X	172.11580	112.06605	41.28449	16.08964	0.0885647	0.23284069	2.6167574	20	9 17.7	19.9
340452 2006 GS ₄₂	16.4	X	178.69284	271.99819	242.91166	10.21429	0.2054490	0.24014654	2.5634125	20	9 9.1	20.9
340453 2006 GB ₄₄	16.8	X	145.84139	305.55501	175.86407	3.10108	0.0692658	0.22136899	2.7063971	20	6 28.4	20.8
340454 2006 GN ₄₇	16.5	X	106.46643	313.34832	200.15638	4.97842	0.0189628	0.21992251	2.7182512	20	6 16.7	20.2
340455 2006 GZ ₄₇	16.9	X	248.44006	10.78641	30.24350	6.51172	0.0246609	0.22492723	2.6777788	20	7 22.6	20.5
340456 2006 GK ₅₂	16.0	X	7.98387	137.99497	122.37465	15.40747	0.1251990	0.21997694	2.7178028	20	7 1.6	19.0
340457 2006 HY ₁	15.9	X	9.60418	65.37364	174.03036	9.52228	0.1269225	0.21563007	2.7542065	20	6 4.6	19.1
340458 2006 HF ₇	15.5	X	182.76358	258.63036	34.98669	21.13242	0.3805001	0.18204462	3.0833121	20	1 3.3	21.7
340459 2006 HA ₉	17.6	X	321.69417	28.95515	11.97187	20.39964	0.0640519	0.38211279	1.8807959	20	12 9.5	19.7
340460 2006 HD ₉	16.7	X	134.32629	349.32862	213.71441	5.64804	0.1568881	0.23668024	2.5883801	20	10 3.4	20.9
340461 2006 HJ ₁₅	16.2	X	179.09464	133.44046	24.40618	12.74602	0.1908590	0.23631233	2.5910659	20	9 22.1	20.5
340462 2006 HW ₁₆	16.8	X	269.61131	324.41507	51.72495	6.46721	0.0442382	0.22559055	2.6725271	20	7 13.5	20.4
340463 2006 HH ₁₉	16.7	X	84.70110	73.41044	130.41732	4.04408	0.0520750	0.22402809	2.6849388	20	7 31.0	20.1
340464 2006 HZ ₂₃	16.8	X	199.98540	106.47464	51.82017	7.75953	0.0630369	0.23759580	2.5817264	20	10 21.5	20.3
340465 2006 HN ₂₆	16.7	X	233.83054	96.55869	189.54994	13.53094	0.2486667	0.19204053	2.9753686	20	1 22.9	22.1
340466 2006 HB ₂₇	17.3	X	109.12557	340.97755	208.93757	22.03134	0.0525124	0.36374247	1.9435992	20	8 20.4	20.0
340467 2006 HO ₂₉	17.5	X	148.18021	354.65401	217.76305	19.67808	0.0371010	0.37602534	1.9010402	20	11 28.8	19.6
340468 2006 HU ₂₉	15.6	X	16.87410	172.10982	73.84960	14.80486	0.1470898	0.21960697	2.7208544	20	6 27.9	18.6
340469 2006 HY ₃₃	16.7	X	121.62828	313.90087	210.82457	12.32562	0.0878744	0.22466438	2.6798669	20	7 25.5	20.9
340470 2006 HW ₃₄	15.9	X	271.66252	276.70041	47.99997	9.41970	0.1599089	0.20892106	2.8128586	20	4 21.8	19.9
340471 2006 HK ₃₆	16.5	X	12.96267	209.08720	44.51363	5.91037	0.0962826	0.22091894	2.7100715	20	6 28.6	19.7
340472 2006 HP ₄₃	16.8	X	225.17503	61.11846	41.86392	10.26847	0.0776228	0.23111565	2.6297622	20	9 10.5	20.6
340473 2006 HB ₄₆	16.7	X	163.90309	347.07174	191.66637	11.57136	0.1148667	0.23798577	2			

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340481 2006 HO ₆₇	17.1	X	122.43006	155.49092	36.79039	3.35487	0.0465314	0.22799684	2.6536899	20	9 2.8	20.8
340482 2006 HP ₆₇	16.8	X	115.05232	118.68682	42.66993	3.34473	0.1548850	0.22261232	2.6963106	20	7 24.6	20.9
340483 2006 HW ₇₃	16.9	X	29.50325	87.19070	125.47840	4.40464	0.0327893	0.21303061	2.7765663	20	5 24.4	20.5
340484 2006 HG ₇₇	16.6	X	202.11626	79.19371	196.12707	18.07020	0.2006743	0.18399695	3.0614627	20	—	—
340485 2006 HN ₇₈	16.8	X	295.36367	107.23945	199.88808	7.78703	0.2328166	0.21311208	2.7758586	20	4 16.2	20.5
340486 2006 HM ₇₉	16.5	X	219.33782	334.19921	48.03972	5.59961	0.0199715	0.21282793	2.7783288	20	5 17.9	20.4
340487 2006 HV ₈₁	16.2	X	240.91132	349.09754	54.16460	7.31408	0.0377156	0.22071734	2.7117215	20	7 12.4	19.9
340488 2006 HQ ₈₄	16.5	X	356.14572	42.18096	211.67269	9.78331	0.0635377	0.21273647	2.7791250	20	5 31.3	20.0
340489 2006 HV ₈₅	16.7	X	102.96441	343.34536	196.23053	11.35576	0.1088038	0.22413748	2.6840652	20	7 26.3	20.8
340490 2006 HD ₈₇	16.6	X	241.12745	210.26316	181.87520	5.12605	0.0593125	0.22407754	2.6845438	20	6 23.8	20.3
340491 2006 HC ₉₁	16.2	X	157.99944	162.32878	193.46615	11.08067	0.1463886	0.19309249	2.9645524	20	2 9.7	21.1
340492 2006 HP ₉₆	16.6	X	227.89344	99.91607	221.52959	5.29310	0.2259961	0.19804070	2.9149632	20	2 28.5	21.7
340493 2006 HU ₉₆	16.9	X	194.79161	219.01729	232.80355	7.13669	0.2272974	0.22508037	2.6765640	20	7 8.1	21.6
340494 2006 HE ₉₇	17.1	X	153.01294	110.01049	37.47709	2.46227	0.0202885	0.22448411	2.6813014	20	8 10.1	20.7
340495 2006 HS ₉₉	17.2	X	70.24345	145.65385	54.52486	5.14442	0.0554728	0.21827581	2.7319053	20	7 7.1	20.9
340496 2006 HG ₁₀₁	16.5	X	301.04458	251.02925	87.41765	7.05663	0.0839818	0.21746720	2.7386732	20	6 29.3	20.0
340497 2006 HP ₁₀₆	17.0	X	136.25465	19.26163	149.03204	5.07636	0.1044564	0.22782280	2.6550412	20	8 20.5	20.8
340498 2006 HG ₁₁₆	16.5	X	271.84671	113.49950	222.52604	5.34388	0.0621124	0.21271206	2.7793377	20	5 19.4	20.3
340499 2006 HH ₁₁₆	16.6	X	224.63297	138.20240	230.97044	5.46383	0.0728970	0.21048137	2.7989402	20	5 3.1	20.6
340500 2006 HG ₁₁₇	15.9	X	222.23530	162.03391	216.29777	11.60532	0.1044906	0.21004744	2.8027937	20	5 10.6	20.2
340501 2006 HT ₁₁₈	16.8	X	258.65229	276.28803	93.90125	7.61329	0.0700771	0.21848704	2.7301443	20	6 15.5	20.5
340502 2006 HW ₁₂₀	16.8	X	188.53973	349.10381	87.44867	7.66556	0.0444865	0.21659695	2.7460040	20	6 19.3	20.8
340503 2006 HC ₁₅₁	16.8	X	189.64560	107.86503	37.90289	14.95279	0.1225253	0.23579354	2.5948651	20	9 23.4	20.9
340504 2006 HZ ₁₅₂	16.7	X	185.77879	65.83188	81.73997	9.06801	0.1376996	0.23260712	2.6185089	20	9 18.6	20.9
340505 2006 HG ₁₅₃	16.9	X	328.39957	109.01791	189.60970	3.43215	0.0816871	0.21579422	2.7528096	20	6 16.9	20.3
340506 2006 HL ₁₅₃	17.2	X	301.53023	293.70995	54.80849	6.28788	0.0217034	0.22413541	2.6840817	20	7 24.3	20.7
340507 2006 JT ₆	16.6	X	313.54505	220.25131	71.71582	4.61398	0.0709074	0.21306871	2.7762353	20	5 17.1	20.1
340508 2006 JJ ₇	16.0	X	196.68564	259.71552	213.92893	11.84674	0.1603352	0.22962887	2.6411013	20	8 6.6	20.5
340509 2006 JT ₈	17.0	X	13.71752	343.72313	243.04913	4.03909	0.0638563	0.21262933	2.7800585	20	5 20.7	20.5
340510 2006 JB ₁₂	16.0	X	189.16321	10.36438	80.38628	13.38646	0.0812610	0.22021517	2.7158424	20	7 7.7	20.1
340511 2006 JO ₁₃	16.9	X	202.56616	280.76582	211.39233	14.32923	0.1170674	0.23269823	2.6178253	20	9 8.8	21.0
340512 2006 JT ₁₃	16.0	X	319.86414	260.49486	58.38546	9.73428	0.1681919	0.21727067	2.7403244	20	6 20.6	19.0
340513 2006 JC ₁₅	16.4	X	239.59352	6.58960	51.19295	3.05969	0.2034793	0.22898390	2.6460583	20	7 9.2	20.5
340514 2006 JG ₁₉	16.3	X	260.53987	262.47771	99.38249	3.58282	0.0891726	0.21526791	2.7572947	20	6 4.1	20.1
340515 2006 JA ₂₀	16.7	X	199.66896	351.97992	121.97485	8.34284	0.1295526	0.22880735	2.6474193	20	8 17.1	20.8
340516 2006 JT ₂₁	16.2	X	262.16711	311.66442	87.92965	13.02446	0.1923832	0.22266273	2.6959036	20	7 11.7	20.0
340517 2006 JH ₂₃	17.4	X	288.78762	260.46456	29.73317	2.53399	0.1643236	0.20662357	2.8336714	20	3 27.9	21.3
340518 2006 JU ₂₅	17.5	X	179.94640	173.09022	16.07621	21.90725	0.0640665	0.37880835	1.8917178	20	11 27.7	20.0
340519 2006 JC ₂₆	15.9	X	355.16572	233.63401	356.78732	8.89980	0.0932925	0.21102091	2.7941672	20	4 22.3	19.2
340520 2006 JY ₂₇	17.0	X	286.01942	201.70463	136.87958	4.08667	0.0981523	0.21461270	2.7629038	20	6 5.7	20.6
340521 2006 JO ₃₁	16.8	X	208.15142	67.15768	63.14011	22.25371	0.1130461	0.23396855	2.6083412	20	10 1.0	21.1
340522 2006 JO ₃₃	16.3	X	359.17130	233.49277	53.36031	14.73581	0.0159653	0.22079898	2.7110530	20	7 22.9	20.1
340523 2006 JV ₃₃	16.9	X	97.99624	333.05671	200.79220	4.71483	0.0440310	0.22027252	2.7153710	20	7 5.9	20.7
340524 2006 JL ₃₄	16.7	X	290.33817	145.71246	208.62339	4.79824	0.0932491	0.21859612	2.7292360	20	7 3.3	20.2
340525 2006 JO ₃₅	15.9	X	249.84124	147.49980	214.10318	14.16008	0.0611672	0.21230869	2.7828568	20	5 25.5	19.9
340526 2006 JD ₃₇	16.9	X	146.91776	111.61741	80.45059	5.63532	0.1852418	0.23570123	2.5955425	20	10 5.3	21.2
340527 2006 JN ₃₇	16.0	X	272.21004	305.58577	78.45201	8.82925	0.1810091	0.22346711	2.6894304	20	7 5.3	19.6
340528 2006 JV ₃₇	16.7	X	141.37708	317.24335	230.61211	17.16966	0.1535111	0.23168571	2.6254468	20	9 15.6	21.3
340529 2006 JY ₃₈	17.1	X	233.86633	271.94892	211.36535	2.74433	0.1476960	0.24041246	2.5615218	20	10 3.8	20.6
340530 2006 JR ₄₈	16.0	X	54.34622	212.19905	21.65266	14.28818	0.1497070	0.22036701	2.7145947	20	8 21.8	19.8
340531 2006 JZ ₄₉	17.1	X	37.03882	214.07768	57.83478	3.56568	0.0291224	0.22798844	2.6537551	20	8 26.1	20.5
340532 2006 JS ₅₀	16.1	X	333.67970	258.81385	47.57575	9.21596	0.1529159	0.21833145	2.7314412	20	7 1.9	19.0
340533 2006 JM ₅₁	16.7	X	226.18584	282.90780	185.85658	11.33124	0.1484363	0.23258754	2.6186558	20	9 3.4	20.6
340534 2006 JY ₅₁	16.9	X	240.62816	289.67488	188.08932	6.46509	0.1540925	0.23897128	2.5718102	20	10 4.3	20.4
340535 2006 JX ₅₃	16.8	X	343.16533	204.86353	63.18665	5.04483	0.0379627	0.21272286	2.7792436	20	5 31.1	20.1
340536 2006 JA ₅₄	16.5	X	301.55587	110.25986	237.34427	5.67334	0.0500222	0.21920528	2.7241774	20	7 16.2	20.1
340537 2006 JX ₅₄	15.7	X	171.09374	113.19043	50.05754	22.73253	0.0789779	0.23140332	2.6275823	20	10 3.4	20.0
340538 2006 JJ ₇₃	17.0	X	291.45132	83.72189	211.99471	9.39709	0.1600424	0.20969909	2.8058967	20	4 6.1	20.8
340539 2006 JR ₈₁	16.7	X	267.51544	27.43486	235.71467	2.82060	0.0825426	0.19649919	2.9301883	20	2 9.1	21.1
340540 2006 KL ₄	16.6	X	224.44743	333.71278	83.82607	3.12027	0.0387430	0.21909204	2.7251159	20	7 9.3	20.5
340541 2006 KS ₄	16.5	X	296.63571	273.57564	66.00697	6.67821	0.0677469	0.21685217	2.7438489	20	6 26.5	20.0
340542 2006 KB ₈	16.6	X	230.48497	338.98285	66.74303	5.76306	0.0434588	0.21770745	2.7366579	20	6 30.5	20.3
340543 2006 KJ ₁₄	16.4	X	111.91124	127.78873	92.32634	8.77229	0.1416393	0.23181937	2.6244375	20	10 7.7	20.6
340544 2006 KJ ₁₆	17.1	X	273.06371	264.39383	97.90350	24.11336	0.1045364	0.35558470	1.9732132	20	6 23.6	18.8
340545 2006 KB ₁₈	16.1	X	191.04542	301.88816	161.67042	12.20360	0.1569943	0.22742711	2.6581199	20	7 22.1	20.5
340546 2006 KN ₂₂	16.0	X	106.62056	85.96249	99.77540	12.72129	0.1357466	0.22303357	2.6929144	20	8 16.2	20.1
340547 2006 KM ₂₈	16.7	X	185.78026	1.94947	62.76439	6.01054	0.0406201	0.21407960	2.7674887	20	5 31.2	20.4
340548 2006 KW ₃₁	17.0	X	157.06290	295.05497	235.90915	8.12597	0.0862501	0.23095770	2.6309611	20	9 11.4	21.1
340549 2006 KU ₃₄	17.4	X	181.08504	294.97662	206.71782	3.90498	0.2279365	0.23213474	2.6220600	20	8 27.8	22.0
340550 2006 KL ₃₅	17.1	X	143.87365	314.42189	198.80571	1.32742	0.1635458	0.22568110	2.6718122	20	8 10.8	21.3
340551 2006 KU ₄₄	16.3	X	247.52586	179.06868	161.69317	13.24196	0.1444153	0.20894791	2.8126176	20	4 19.4	20.7
340552 2006 KL ₄₈	16.4	X	248.98721	301.15096	99.62517	6.16828	0.1639289	0.21968489	2.7202110	20	7 1.2	20.2
340553 2006 KP ₄₈	16.5	X	260.68565	183.41561	99.09020	5.51756	0.1770261	0.1				

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
340561	2006	KR ₇₈	16.9	X	239.49317	207.08839	211.91479	10.28222	0.0242116	0.22145780	2.7056736	20	7 29.4	20.9
340562	2006	KC ₈₁	16.1	X	248.09752	284.44710	91.72106	13.09252	0.1779723	0.21213026	2.7844172	20	5 29.4	20.5
340563	2006	KH ₉₂	16.6	X	54.54733	10.22404	206.74048	6.99541	0.0184111	0.21740597	2.7391874	20	7 1.2	20.3
340564	2006	KH ₉₅	16.2	X	90.78563	325.43276	199.44526	8.90555	0.0758051	0.21501887	2.7594233	20	6 19.4	20.2
340565	2006	KS ₉₆	15.7	X	150.27035	231.06707	122.16006	28.43681	0.1981008	0.17933741	3.1142642	20	2 8.3	20.8
340566	2006	KB ₁₀₀	15.9	X	346.56406	266.53865	338.65887	12.28261	0.1739239	0.21054204	2.7984024	20	4 18.9	19.2
340567	2006	KA ₁₀₅	16.3	X	179.30899	352.42729	157.33459	13.09002	0.2543622	0.23297104	2.6157812	20	9 6.4	20.9
340568	2006	KS ₁₀₈	16.7	X	204.12773	273.82341	36.38898	1.74057	0.2077736	0.19237658	2.9719026	20	2 1.1	21.7
340569	2006	KK ₁₁₅	16.7	X	258.30820	188.14597	184.03579	3.49116	0.1988887	0.21361190	2.7715268	20	5 31.5	20.8
340570	2006	KY ₁₁₅	15.9	X	201.73588	20.97024	65.20790	14.59404	0.1534554	0.22254791	2.6968308	20	7 12.3	20.3
340571	2006	KG ₁₂₃	16.0	X	238.15086	20.20726	281.04181	11.14637	0.1338246	0.18982293	2.9984969	20	2 17.1	20.9
340572	2006	KM ₁₂₃	15.6	X	172.25123	49.81467	263.70169	14.82566	0.1249136	0.17794330	3.1305090	20	1 6.7	20.6
340573	2006	MF ₃	15.7	X	281.08979	313.16181	84.47524	23.07179	0.0667639	0.22723138	2.6596460	20	9 3.8	19.6
340574	2006	MG ₁₂	16.2	X	156.99754	29.67994	289.40737	11.10589	0.2715923	0.17674184	3.1446801	20	1 10.7	21.6
340575	2006	MO ₁₄	15.7	X	204.57146	285.43451	325.89840	24.48735	0.2798810	0.17558510	3.1584762	20	—	—
340576	2006	OO ₃	15.6	X	146.85756	50.22610	309.29607	15.59355	0.2942834	0.17844036	3.1246927	20	2 15.7	21.1
340577	2006	OU ₅	15.6	X	187.06428	212.80663	105.42764	18.56777	0.2821731	0.18046084	3.1013258	20	1 31.4	21.3
340578	2006	OB ₁₂	15.0	X	190.49758	318.54101	329.17352	27.28252	0.1685846	0.17366138	3.1817585	20	1 3.1	20.6
340579	2006	PY	15.2	X	203.99443	158.49192	156.81132	17.68183	0.1829410	0.18138713	3.0907585	20	2 6.2	20.5
340580	2006	PS ₃	15.0	X	160.77970	46.18544	293.93886	25.64990	0.1401712	0.17306515	3.1890620	20	1 26.3	20.1
340581	2006	PL ₅	15.6	X	165.60609	201.94962	110.07988	11.98256	0.1940199	0.17535917	3.1611886	20	1 5.0	20.7
340582	2006	PD ₇	15.5	X	161.47211	233.87910	122.84908	11.63184	0.0925092	0.18142752	3.0902997	20	2 15.7	20.2
340583	2006	PG ₉	15.8	X	175.88026	61.21615	324.87697	9.37751	0.1121731	0.18848056	3.0122710	20	3 30.6	20.7
340584	2006	PP ₁₀	15.8	X	117.54841	96.55756	318.02925	12.29998	0.2756597	0.17733955	3.1376101	20	3 22.5	21.0
340585	2006	PH ₁₇	15.3	X	178.36031	344.18963	342.80350	16.80075	0.1859923	0.17680852	3.1438894	20	2 4.8	20.6
340586	2006	PL ₂₀	15.2	X	129.92539	312.25668	55.07213	27.28537	0.1698672	0.17497256	3.1658433	20	2 13.6	20.6
340587	2006	PW ₂₁	15.7	X	214.03870	16.40834	283.59943	4.72269	0.1297417	0.18130326	3.0917116	20	1 29.3	20.7
340588	2006	PJ ₂₃	16.1	X	134.51424	26.47167	318.47144	5.84485	0.2514339	0.17391435	3.1786724	20	1 21.4	21.3
340589	2006	PB ₂₉	14.9	X	182.01487	340.48451	354.62339	17.25365	0.2052286	0.17804697	3.1292937	20	2 17.9	20.3
340590	2006	PT ₃₂	15.3	X	191.03064	245.97728	385.35794	17.43699	0.2455503	0.18157034	3.0886790	20	2 24.8	21.0
340591	2006	PZ ₃₆	15.4	X	150.52558	349.95576	326.27392	10.67458	0.0811961	0.17241952	3.1970181	20	—	—
340592	2006	PA ₃₈	15.8	X	211.92272	109.06723	159.02336	12.85470	0.1329553	0.17577392	3.1562138	20	—	—
340593	2006	PQ ₃₉	15.7	X	111.94010	257.21330	128.91125	14.15854	0.2556145	0.17447180	3.1718981	20	2 18.3	20.6
340594	2006	QH ₁	15.5	X	232.17270	278.29347	341.88752	21.26578	0.2031131	0.18047426	3.1011721	20	1 1.6	21.1
340595	2006	QB ₂	15.7	X	157.65728	23.17239	306.88916	4.17334	0.1419441	0.17503320	3.1651121	20	1 15.4	20.6
340596	2006	QE ₁₇	15.7	X	195.60229	207.56674	134.19834	11.88094	0.1146850	0.18460402	3.0547473	20	3 3.3	20.5
340597	2006	QN ₂₁	15.8	X	138.86120	231.33457	161.52219	17.24936	0.3341157	0.17777280	3.1325103	20	3 26.0	21.4
340598	2006	QE ₂₂	15.5	X	180.66794	187.71996	144.44057	14.11286	0.1089786	0.17992580	3.1074710	20	2 5.0	20.3
340599	2006	QF ₃₂	15.4	X	203.37154	147.46354	175.85468	18.03678	0.1046571	0.18195542	3.0843197	20	2 14.2	20.4
340600	2006	QW ₃₂	15.8	X	145.44326	6.83987	323.97987	14.49086	0.2458894	0.17197307	3.2025488	20	1 16.2	21.2
340601	2006	QQ ₃₉	15.4	X	132.44280	233.63893	112.56849	28.37880	0.2035411	0.17230415	3.1984451	20	1 16.1	20.3
340602	2006	QX ₄₃	16.3	X	158.51044	107.02678	284.84162	4.23867	0.1414547	0.18467369	3.0539789	20	3 24.4	21.2
340603	2006	QG ₄₄	15.4	X	143.59311	257.15499	87.86044	10.86427	0.2315412	0.17542030	3.1604541	20	1 28.1	20.6
340604	2006	QW ₄₄	15.8	X	174.68135	167.89680	158.02154	16.72355	0.0877375	0.17671755	3.1449682	20	1 21.8	20.9
340605	2006	QN ₄₈	15.2	X	183.46759	328.93497	0.75358	16.89682	0.2911596	0.17733956	3.1376100	20	2 15.6	21.0
340606	2006	QG ₅₂	16.3	X	186.26300	215.08410	96.05822	2.84477	0.2011620	0.17792449	3.1307296	20	1 20.6	21.7
340607	2006	QK ₅₄	15.8	X	179.06694	44.79610	294.54116	8.95716	0.3244099	0.18010641	3.1053932	20	2 15.9	21.6
340608	2006	QA ₅₅	15.2	X	112.19138	263.53397	144.71800	14.78448	0.2424609	0.17640277	3.1487085	20	3 14.8	20.1
340609	2006	QC ₅₅	15.4	X	172.09976	347.96340	339.28601	16.92863	0.1926731	0.17789140	3.1311179	20	1 31.2	20.8
340610	2006	QL ₅₉	15.6	X	167.99524	29.58987	329.23421	10.80703	0.1291200	0.18130194	3.0917266	20	2 24.5	20.4
340611	2006	QS ₆₁	15.8	X	141.40748	169.82055	176.95508	7.16808	0.1235173	0.17273908	3.1930740	20	1 16.3	20.7
340612	2006	QH ₆₃	15.8	X	121.89682	234.65153	146.70080	11.33437	0.0926326	0.17557488	3.1585988	20	2 1.6	20.3
340613	2006	QO ₆₅	15.8	X	113.86172	81.55592	337.97545	9.42701	0.0645186	0.18007502	3.1057541	20	3 4.7	20.1
340614	2006	QO ₆₆	15.8	X	206.02807	10.75996	335.88403	12.77371	0.0550865	0.18670963	3.0317374	20	3 15.0	20.3
340615	2006	QO ₇₁	16.3	X	179.76643	211.55644	132.61184	2.52319	0.1955263	0.17993222	3.1073971	20	2 21.4	21.4
340616	2006	QL ₈₈	15.6	X	144.42582	210.32657	162.16728	18.84051	0.2227537	0.17578157	3.1561223	20	2 26.3	20.8
340617	2006	QH ₉₃	15.9	X	165.65042	18.11114	332.05207	8.10834	0.0899631	0.18044333	3.1015265	20	2 11.5	20.5
340618	2006	QR ₉₈	15.2	X	105.42065	94.12923	333.52482	20.25187	0.2924651	0.17480134	3.1679103	20	3 25.7	20.4
340619	2006	QR ₉₉	15.0	X	144.93915	36.58282	310.88219	26.54387	0.1792770	0.17508880	3.1644420	20	1 27.7	20.0
340620	2006	QW ₁₀₂	16.0	X	167.14259	7.69344	328.20862	8.39477	0.0632719	0.17611295	3.1521619	20	1 26.7	20.7
340621	2006	QW ₁₀₆	15.5	X	170.72379	27.73193	327.43450	12.31523	0.0766108	0.18062953	3.0993947	20	2 20.5	20.3
340622	2006	QN ₁₁₄	15.7	X	153.97551	92.01467	279.11098	7.33122	0.1616336	0.17975203	3.1094734	20	2 25.6	20.8
340623	2006	QF ₁₁₅	15.4	X	175.38490	88.56842	250.25096	8.91651	0.1177692	0.17839539	3.1252178	20	2 5.5	20.5
340624	2006	QT ₁₁₈	14.9	X	138.74273	352.62498	340.76365	18.52971	0.1000658	0.16826021	3.2494893	20	—	—
340625	2006	QL ₁₂₀	15.3	X	144.12003	86.77371	259.24334	7.60425	0.0813181	0.17440021	3.1727661	20	1 13.7	20.0
340626	2006	QT ₁₂₁	15.4	X	141.79806	15.76520	1.54814	15.10727	0.2855539	0.17590900	3.1545979	20	3 8.1	20.8
340627	2006	QP ₁₂₂	15.5	X	133.31182	66.25342	340.83604	15.39836	0.2514171	0.17633831	3.1494757	20	3 25.8	20.8
340628	2006	QV ₁₂₄	16.2	X	172.46232	80.78407	270.43067	7.61117	0.1798889	0.18109990	3.0940256	20	2 19.5	21.5
340629	2006	QB ₁₂₅	15.8	X	147.03986	88.86099	283.34451	9.18977	0.1079696	0.17934416	3.1141861	20		

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340641 2006 QO ₁₅₉	16.5	X	176.48153	134.19239	176.16686	6.26725	0.2667893	0.17486822	3.1671026	20	1 13.8	22.1
340642 2006 QX ₁₆₂	15.8	X	204.59640	309.40255	342.65300	9.43651	0.1909161	0.17508936	3.1644353	20	1 15.2	21.2
340643 2006 QZ ₁₆₃	15.8	X	118.32557	114.82151	265.98761	2.78936	0.1867700	0.17138485	3.2098724	20	2 8.7	20.7
340644 2006 QV ₁₆₆	15.9	X	156.10349	210.71216	174.26108	16.34072	0.1394634	0.18170606	3.0871409	20	3 16.4	20.7
340645 2006 QX ₁₆₇	14.9	X	292.30612	228.08622	352.94776	23.09892	0.2408826	0.18244833	3.0787620	20	1 5.8	20.0
340646 2006 QH ₁₆₉	15.1	X	130.72608	359.56989	21.45944	20.92758	0.3742317	0.17102751	3.2143419	20	3 15.6	20.9
340647 2006 QK ₁₇₃	16.6	X	77.28509	333.78646	126.97772	3.44836	0.0593534	0.18145095	3.0900337	20	3 10.9	20.8
340648 2006 QF ₁₈₃	16.0	X	71.85614	241.15098	194.32770	10.22191	0.1229883	0.17099848	3.2147057	20	2 7.5	20.4
340649 2006 QK ₁₈₃	16.3	X	126.25975	208.55567	168.39415	1.92174	0.0792601	0.17213243	3.2005719	20	1 31.3	21.0
340650 2006 QQ ₁₈₅	15.7	X	72.10919	92.20684	344.37975	10.51481	0.0476904	0.17454288	3.1710369	20	2 4.6	20.0
340651 2006 RQ ₁	15.3	X	202.04618	20.64571	288.65338	17.44075	0.2485270	0.18039270	3.1021068	20	1 27.4	20.9
340652 2006 RD ₅	15.4	X	152.93916	58.04774	283.55989	7.92065	0.1492720	0.17314882	3.1880346	20	1 23.8	20.4
340653 2006 RM ₇	15.7	X	163.42633	145.24620	184.88511	15.82836	0.1889102	0.17464409	3.1698116	20	1 20.9	21.2
340654 2006 RZ ₁₁	16.0	X	120.12814	166.23037	218.05703	0.41198	0.1735853	0.17162258	3.2069074	20	2 13.7	20.7
340655 2006 RC ₁₂	15.2	X	210.41269	282.29016	358.54577	15.33044	0.2068224	0.17439062	3.1728823	20	1 7.9	20.8
340656 2006 RE ₁₃	16.3	X	170.50181	134.11490	227.76480	9.86981	0.0651715	0.18291889	3.0734797	20	2 23.9	21.1
340657 2006 RW ₁₅	15.4	X	139.27727	63.41411	283.83340	11.22447	0.1033680	0.17152873	3.2080771	20	1 15.9	20.2
340658 2006 RA ₁₇	15.3	X	150.82822	53.93901	340.48542	26.28595	0.1763986	0.17819590	3.1275498	20	3 17.5	20.6
340659 2006 RF ₁₇	15.8	X	189.73032	358.90480	7.81093	16.11757	0.2169548	0.18366026	3.0652030	20	3 26.0	21.0
340660 2006 RR ₂₅	16.4	X	208.55882	83.83367	187.30475	8.95728	0.0494135	0.17323687	3.1869542	20	—	—
340661 2006 RW ₂₆	15.7	X	167.14530	323.17144	15.54850	26.72861	0.1522787	0.17530323	3.1618610	20	2 16.5	21.2
340662 2006 RT ₂₈	16.5	X	214.70972	82.87843	216.07927	6.18987	0.1252188	0.18131340	3.0915963	20	1 27.7	21.5
340663 2006 RO ₂₉	15.9	X	126.82992	228.90677	176.28928	16.33005	0.1083918	0.18098345	3.0953527	20	3 7.4	20.5
340664 2006 RD ₃₀	16.5	X	157.66883	145.25912	205.99082	10.27408	0.1386940	0.17764673	3.1339922	20	2 4.9	21.6
340665 2006 RA ₃₅	15.5	X	225.45598	320.74892	352.33464	7.76045	0.0573874	0.18200261	3.0837865	20	2 29.1	20.1
340666 2006 RO ₃₆	17.8	X	98.30377	261.14256	270.94430	23.85365	0.2312038	1.14234494	0.9062984	20	—	—
340667 2006 RX ₃₆	15.3	X	187.13512	130.48140	158.16008	10.65772	0.1185530	0.17009243	3.2261116	20	—	—
340668 2006 RE ₃₇	15.8	X	170.42629	160.93653	166.74242	18.47536	0.1989393	0.17427671	3.1742647	20	1 25.2	21.3
340669 2006 RD ₃₉	15.3	X	148.10077	169.26474	194.95178	19.61468	0.1023595	0.17152684	3.2081007	20	2 7.4	20.5
340670 2006 RH ₃₉	15.7	X	121.05218	46.74431	21.01972	16.25440	0.2083268	0.17442653	3.1724468	20	4 11.9	20.6
340671 2006 RZ ₄₁	16.2	X	187.97609	144.29663	184.55984	7.03736	0.0891353	0.17479219	3.1680209	20	2 7.0	21.2
340672 2006 RJ ₄₂	15.7	X	25.84344	133.61629	16.00259	5.49932	0.0862598	0.17525731	3.1624133	20	3 3.8	19.6
340673 2006 RV ₄₂	15.9	X	118.75463	41.14372	13.48120	12.12293	0.0881913	0.17508329	3.1645084	20	3 11.9	20.6
340674 2006 RG ₄₃	15.9	X	91.74271	274.79520	181.61405	5.66003	0.1993092	0.17463076	3.1699729	20	4 12.9	20.3
340675 2006 RQ ₅₄	15.5	X	205.47618	280.99713	37.20762	5.45222	0.0436211	0.17388187	3.1790683	20	2 16.4	20.2
340676 2006 RY ₅₇	16.0	X	193.08583	303.73755	9.36103	9.09493	0.0991535	0.17526638	3.1623042	20	1 29.4	21.0
340677 2006 RD ₆₅	15.9	X	139.76955	65.71504	354.90477	6.97935	0.1683515	0.18190489	3.0848908	20	4 12.4	20.8
340678 2006 RH ₆₇	16.2	X	228.62986	341.04484	302.97408	6.28325	0.1153544	0.18157752	3.0885976	20	1 25.4	21.0
340679 2006 RM ₆₉	15.9	X	236.60614	273.40111	359.22313	7.90082	0.0874514	0.17538867	3.1608340	20	1 24.4	20.8
340680 2006 RW ₇₇	16.0	X	52.16005	317.01231	168.45552	7.46963	0.1227837	0.17557637	3.1585808	20	3 14.6	19.8
340681 2006 RN ₇₈	15.6	X	184.34017	326.29570	13.61754	12.07777	0.0441027	0.17614909	3.1517308	20	2 21.2	20.4
340682 2006 RM ₈₁	16.1	X	207.60550	309.10198	5.93038	10.00273	0.0697301	0.17712105	3.1401900	20	2 15.2	20.9
340683 2006 RS ₈₃	17.8	X	3.64043	80.66199	199.62929	2.24195	0.1684613	0.27507706	2.3415304	20	7 31.9	19.5
340684 2006 RE ₉₄	15.6	X	111.38882	219.86150	211.51214	7.78665	0.0758131	0.17561740	3.1580889	20	3 16.8	20.2
340685 2006 RD ₁₀₀	15.5	X	154.18918	65.20083	286.72049	8.09165	0.0860161	0.17493445	3.1663032	20	1 31.2	20.4
340686 2006 RX ₁₀₁	15.4	X	138.88419	335.72887	8.54215	28.51204	0.1914793	0.17068866	3.2185946	20	1 30.9	21.0
340687 2006 RA ₁₀₈	15.4	X	353.94228	175.29226	8.74460	10.60739	0.1627342	0.17646889	3.1479219	20	2 24.4	19.1
340688 2006 RY ₁₂₀	16.0	X	197.11647	96.28824	215.82587	3.69896	0.0960650	0.17317490	3.1877145	20	1 28.3	21.0
340689 2006 RJ ₁₂₁	16.1	X	225.35596	301.49655	10.49049	9.48668	0.1729408	0.18260341	3.0770186	20	2 24.1	21.2
340690 2006 RH ₁₂₂	16.3	X	137.28761	187.50962	173.91524	4.84204	0.1786935	0.17035985	3.2227346	20	2 3.9	21.3
340691 2006 RT ₁₂₂	15.0	X	105.00946	88.51964	303.73459	19.27248	0.1331829	0.17076774	3.2176008	20	1 31.4	19.7
340692 2006 SN	15.5	X	179.55477	105.73180	257.90857	11.12988	0.1703999	0.18187151	3.0852682	20	3 8.0	20.8
340693 2006 SC ₂	15.3	X	131.61919	76.21954	320.25462	20.98483	0.2304847	0.17496841	3.1658934	20	3 7.4	20.6
340694 2006 SW ₈	15.7	X	169.60257	161.31202	200.19785	10.62701	0.1213871	0.17830863	3.1262316	20	2 26.7	20.7
340695 2006 SL ₉	15.7	X	140.21796	144.97471	174.27973	16.97836	0.1036367	0.17041759	3.2220066	20	—	—
340696 2006 SM ₁₁	15.5	X	100.89450	274.59676	181.89864	25.55090	0.2839448	0.17802295	3.1295752	20	5 5.1	20.7
340697 2006 SY ₁₇	16.1	X	123.78004	23.95878	27.25152	9.25113	0.0988516	0.17453698	3.1711083	20	3 14.7	20.8
340698 2006 SF ₂₁	15.5	X	126.72460	33.43671	348.73454	8.64930	0.0934984	0.17449620	3.1716024	20	2 10.3	20.2
340699 2006 SM ₂₁	15.5	X	143.56614	101.69237	286.42738	1.58661	0.2359393	0.17542703	3.1603732	20	3 15.1	20.7
340700 2006 SC ₂₃	15.4	X	137.13791	327.50404	53.21348	13.44953	0.1862254	0.17409205	3.1765090	20	3 4.9	20.7
340701 2006 SA ₂₇	15.9	X	214.01269	55.73431	251.03494	6.97370	0.1943680	0.17874594	3.1211305	20	2 3.3	21.2
340702 2006 SU ₃₂	15.4	X	211.95789	304.31692	3.75029	12.74428	0.0767285	0.17642340	3.1484630	20	2 12.5	20.3
340703 2006 SJ ₃₃	15.7	X	109.00663	127.34278	260.41484	5.04735	0.1417775	0.17008998	3.2261427	20	1 31.9	20.5
340704 2006 SR ₃₃	15.8	X	157.43913	109.28629	210.26225	9.61794	0.1548372	0.16967093	3.2314524	20	1 3.5	21.0
340705 2006 SK ₃₆	15.4	X	199.00052	307.09557	24.65637	19.89581	0.0997468	0.17945342	3.1129219	20	3 2.8	20.5
340706 2006 SU ₃₈	15.4	X	196.03347	343.66696	355.75158	9.61967	0.0534762	0.17819531	3.1275568	20	2 29.9	20.1
340707 2006 SN ₃₉	15.7	X	124.51956	172.12645	213.74897	6.05056	0.2076403	0.17201355	3.2020463	20	2 21.5	20.7
340708 2006 SQ ₃₉	15.3	X	143.39986	49.98466	332.01599	11.09789	0.0749200	0.17626755	3.1503186	20	2 24.0	19.9
340709 2006 SJ ₄₅	15.5	X	336.70550	333.42935	224.16231	11.04939	0.0728037	0.18372410	3.0644930	20	2 14.6	19.8
340710 2006 SB ₄₇	15.8	X	173.77543	38.05790	324.72473	6.56285	0.1143154	0.17973715	3.1096450	20	3 4.5	20.6
340711 2006 SF ₄₇	15.9	X	299.49995	255.19119	332.66485	9.32249	0.0062483	0.17870082	3.1216558	20	2 18.1	20.3
340712 2006 ST ₅₂	15.8	X	187.52340	133.65904	203.75486	12.14501	0.1041314	0.17766506	3.1337766	20	2 14.7	20.9
340713 2006 SV ₅₅	15.2	X	175.40684	306.27972	35.69925	26.44108	0.1763693	0.1				

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340721 2006 SB ₈₅	16.3	X	330.20915	161.13632	15.64647	11.35096	0.0733992	0.17065109	3.2190669	20	1 21.2	20.9
340722 2006 SC ₈₅	15.6	X	117.48043	12.73359	23.61061	7.23408	0.0401290	0.17241669	3.1970531	20	2 11.4	20.2
340723 2006 SE ₁₁₄	16.0	X	131.27200	78.67260	4.76200	14.53282	0.2837589	0.18006269	3.1058959	20	5 7.8	21.5
340724 2006 SM ₁₃₁	16.3	X	194.30894	112.96867	190.65671	15.38846	0.2666479	0.17850609	3.1239256	20	1 16.4	22.1
340725 2006 SV ₁₃₃	15.4	X	39.78906	157.23444	335.83138	8.39238	0.0343153	0.17589152	3.1548069	20	2 27.3	19.7
340726 2006 SH ₁₃₇	15.7	X	168.21363	239.14650	93.94870	11.13662	0.2307938	0.17601269	3.1533588	20	2 3.1	21.1
340727 2006 SP ₁₄₀	15.3	X	128.13699	290.46110	74.75001	16.92564	0.1188752	0.16965718	3.2316270	20	1 27.5	20.3
340728 2006 SM ₁₄₂	15.9	X	241.92385	283.10276	5.09106	11.54146	0.0405123	0.17993202	3.1073994	20	2 21.8	20.5
340729 2006 SL ₁₄₃	15.7	X	194.10813	241.61686	6.24079	9.57600	0.0594120	0.15878849	3.3774586	20	—	—
340730 2006 SZ ₁₄₃	15.6	X	318.72488	223.60554	6.42514	11.15686	0.0527133	0.17973710	3.1096456	20	3 11.2	19.9
340731 2006 SQ ₁₅₅	15.2	X	130.88644	205.72706	149.55403	13.62945	0.0773393	0.17100653	3.2146048	20	1 10.9	20.1
340732 2006 SK ₁₆₃	16.2	X	115.38521	16.05684	52.17442	2.23048	0.1848953	0.17351118	3.1835945	20	4 2.6	20.9
340733 2006 SO ₁₆₄	15.4	X	177.82239	18.19318	307.74126	16.42613	0.0896340	0.17672569	3.1448717	20	1 26.5	20.2
340734 2006 SF ₁₆₅	15.8	X	244.29584	313.10192	322.01586	6.50906	0.2325936	0.18075827	3.0979229	20	1 23.5	21.0
340735 2006 SC ₁₆₅	15.9	X	152.91929	67.89903	253.74035	3.81283	0.1192801	0.16821876	3.2500230	20	—	—
340736 2006 SD ₁₇₂	16.5	X	93.06842	267.31826	188.24717	14.05593	0.1109301	0.17820660	3.1274247	20	3 31.2	20.9
340737 2006 SP ₁₇₉	15.8	X	341.08412	86.45077	26.10333	5.40667	0.0523829	0.15913169	3.3726007	20	—	—
340738 2006 SJ ₁₉₀	15.8	X	67.75264	99.87323	9.24114	11.18618	0.0420371	0.17786314	3.1314495	20	3 8.7	20.1
340739 2006 SL ₁₉₄	15.8	X	210.16861	319.22412	353.24411	7.33948	0.0897437	0.17512756	3.1639750	20	2 12.9	20.6
340740 2006 SW ₁₉₈	15.5	X	186.58119	246.96409	71.58325	17.43424	0.2255954	0.17911445	3.1168481	20	2 1.7	21.1
340741 2006 SA ₂₀₀	16.1	X	82.44437	99.67670	4.85983	5.19966	0.1521971	0.17366049	3.1817695	20	4 3.6	20.3
340742 2006 SY ₂₀₆	16.3	X	174.41065	327.64542	25.01680	4.24905	0.0738840	0.17374278	3.1807647	20	2 24.0	21.1
340743 2006 SC ₂₀₈	16.2	X	190.54592	139.02694	179.24773	16.98637	0.2095534	0.18007405	3.1057653	20	1 29.1	21.8
340744 2006 SS ₂₁₀	15.5	X	201.42731	335.06924	21.91770	16.84129	0.1037497	0.18313306	3.0710829	20	3 28.2	20.3
340745 2006 SC ₂₁₅	15.4	X	105.87524	54.35500	23.51619	15.90410	0.2449850	0.17307602	3.1889286	20	4 11.1	20.1
340746 2006 SO ₂₃₂	16.2	X	103.02896	241.13505	235.55990	4.00688	0.1045519	0.18414691	3.0598003	20	5 7.1	20.6
340747 2006 SE ₂₄₁	16.0	X	117.95466	214.47049	181.70009	14.33612	0.0818135	0.17224818	3.1991378	20	2 11.8	20.7
340748 2006 SL ₂₄₃	16.5	X	75.52940	0.56137	122.70485	2.70430	0.1605745	0.17853435	3.1235960	20	4 20.7	20.7
340749 2006 SK ₂₆₄	15.6	X	152.28835	3.13334	252.57390	8.75106	0.0241986	0.14884356	3.5262737	20	12 8.4	20.6
340750 2006 SG ₂₇₀	15.8	X	270.02862	38.36528	208.99428	9.84393	0.0367357	0.18100647	3.0950902	20	1 29.7	20.5
340751 2006 SB ₂₇₆	15.9	X	144.78685	238.92493	173.61929	15.02640	0.1282396	0.18472437	3.0534203	20	4 8.2	20.7
340752 2006 SC ₂₇₆	16.4	X	82.22429	225.50939	180.42743	8.98974	0.0527405	0.17261851	3.1945607	20	1 8.9	20.9
340753 2006 SY ₂₈₂	15.6	X	188.60942	350.94351	14.22002	9.70260	0.1109569	0.18368111	3.0649711	20	3 23.5	20.3
340754 2006 SV ₂₈₃	15.5	X	173.08604	150.90293	166.69165	18.16239	0.1900606	0.17049225	3.2210660	20	1 16.3	21.1
340755 2006 SD ₂₈₇	15.4	X	155.51346	147.48989	216.93210	25.70625	0.1327739	0.17541608	3.1605047	20	2 13.4	20.8
340756 2006 ST ₂₈₉	15.3	X	212.31604	264.34016	44.58067	26.21858	0.2183864	0.17790602	3.1309463	20	2 18.7	21.1
340757 2006 SQ ₂₉₄	16.3	X	160.09001	135.55894	195.81523	10.39403	0.2023638	0.17195863	3.2027280	20	1 20.9	21.8
340758 2006 SH ₂₉₈	16.4	X	87.22764	266.71258	186.55235	1.35059	0.1732764	0.17237148	3.1976121	20	3 30.3	20.9
340759 2006 SX ₃₀₀	15.6	X	126.63247	333.86778	60.69953	10.96019	0.0991681	0.17182309	3.2044121	20	2 29.6	20.5
340760 2006 SY ₃₀₇	15.4	X	22.84477	144.75549	4.35840	16.14148	0.0511943	0.17422363	3.1749094	20	3 1.3	19.7
340761 2006 SL ₃₁₀	15.4	X	200.51126	291.77446	11.15996	23.70430	0.1413925	0.17286888	3.1914754	20	1 31.8	21.0
340762 2006 SJ ₃₁₈	15.7	X	216.75412	236.67175	34.95180	14.22934	0.2412889	0.17152569	3.2081151	20	—	—
340763 2006 SF ₃₂₃	16.4	X	94.77990	278.84114	146.77485	3.92326	0.0150430	0.17267938	3.1938099	20	2 12.9	20.8
340764 2006 SS ₃₂₄	16.2	X	77.44886	314.26459	159.95902	3.86131	0.1476061	0.17588364	3.1549011	20	4 9.9	20.5
340765 2006 SY ₃₂₄	14.8	X	134.55999	344.05271	58.83327	29.71234	0.2260498	0.17527188	3.1622380	20	4 9.9	20.4
340766 2006 SF ₃₂₇	16.2	X	105.49400	9.03470	58.48535	3.01712	0.1174588	0.17223615	3.1992868	20	3 14.6	20.7
340767 2006 SN ₃₂₉	16.2	X	46.83711	313.78789	171.23736	4.61550	0.1309229	0.17121874	3.2119481	20	3 6.8	20.1
340768 2006 SS ₃₃₃	15.9	X	74.23428	84.29643	29.76139	11.71541	0.1211908	0.17623247	3.1507366	20	4 2.8	20.1
340769 2006 SM ₃₃₄	15.8	X	101.29395	233.88590	175.49032	10.65946	0.1173250	0.17001978	3.2270306	20	2 14.0	20.4
340770 2006 SW ₃₃₅	16.0	X	357.20171	145.43318	63.01531	7.46994	0.0665350	0.18256885	3.0774070	20	4 5.9	20.0
340771 2006 SF ₃₃₆	16.0	X	99.30190	343.30464	107.02101	5.20197	0.0492684	0.17790922	3.1309088	20	3 26.2	20.4
340772 2006 SP ₃₄₇	15.8	X	150.52252	157.68939	203.93736	13.83743	0.0743139	0.17084628	3.2166146	20	2 4.7	20.8
340773 2006 SR ₃₅₁	15.6	X	200.92541	321.54713	22.24534	9.77496	0.0703999	0.18022719	3.1040056	20	3 12.6	20.3
340774 2006 SR ₃₅₃	15.3	X	118.45920	357.68669	40.24434	13.25810	0.1038317	0.17055042	3.2203335	20	2 26.5	20.2
340775 2006 SO ₃₅₈	15.5	X	299.55396	190.60662	37.64218	9.72132	0.0288831	0.17387231	3.1791847	20	2 20.3	20.1
340776 2006 SG ₃₆₆	15.2	X	342.72810	102.68670	35.29711	17.63369	0.0372110	0.15803069	3.3882472	20	—	—
340777 2006 SM ₃₆₈	15.5	X	212.16720	288.26429	355.30820	15.77143	0.1838825	0.17488120	3.1669459	20	1 13.4	21.0
340778 2006 SL ₃₇₅	15.9	X	72.16117	64.37748	61.90458	3.47709	0.0421680	0.18137148	3.0909363	20	4 3.0	20.0
340779 2006 SD ₃₇₉	16.1	X	110.74056	229.09709	178.06168	5.87227	0.1636331	0.17294050	3.1905942	20	2 28.8	20.8
340780 2006 SA ₃₈₀	15.9	X	198.00688	193.89573	136.57029	9.71614	0.0748830	0.17480478	3.1678687	20	2 21.1	20.6
340781 2006 SM ₃₈₂	15.2	X	188.16870	243.90028	58.98581	27.44125	0.2561291	0.16996321	3.2277466	20	1 15.5	21.2
340782 2006 SM ₃₈₃	16.1	X	90.72559	274.13934	157.79629	9.89639	0.1204394	0.17128434	3.2111279	20	3 1.5	20.6
340783 2006 SV ₃₈₃	16.0	X	213.91915	256.77788	42.79029	15.79208	0.2274570	0.17662957	3.1460124	20	2 2.2	21.7
340784 2006 SW ₃₉₁	15.7	X	123.32950	200.34832	219.96931	11.49799	0.1314634	0.17806825	3.1290444	20	3 22.5	20.5
340785 2006 SY ₃₉₄	16.2	X	143.80158	82.27099	327.21520	13.93821	0.2860390	0.17588086	3.1549344	20	4 6.2	21.9
340786 2006 SZ ₃₉₄	16.3	X	131.39895	68.49529	9.07897	11.75629	0.3160996	0.17887329	3.1196489	20	5 4.6	21.8
340787 2006 SN ₃₉₅	15.7	X	261.32612	238.90025	17.10188	12.44563	0.1072191	0.17516927	3.1634728	20	1 30.6	20.7
340788 2006 SD ₄₀₃	15.9	X	202.66670	290.80279	32.44046	9.84836	0.1211721	0.17767378	3.1336741	20	2 20.2	21.0
340789 2006 SE ₄₀₃	15.3	X	337.32074	120.63313	32.65099	14.78135	0.0488328	0.16180962	3.3352866	20	1 4.5	20.1
340790 2006 SJ ₄₀₅	15.8	X	224.08579	101.36587	195.34539	11.45628	0.0444768	0.17567419	3.1574082	20	2 5.7	20.6
340791 2006 TE ₁₀	15.5	X	65.04207	216.86475	250.82446	10.66602	0.0321257	0.17731285	3.1379251	20	2 23.4	20.0
340792 2006 TW ₁₅	15.3	X	202.67360	97.05858	205.37033	15.05572	0.0039885	0.16979131	3.2299248	20	1 20.7	20.2
340793 2006 TZ ₁₅	16.0	X	102.05495	240.45330	206.74796	10.25807	0.0					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
340801	2006	<i>TZ</i> ₆₈	15.6	X	144.97972	318.69748	51.10081	13.00741	0.1127444	0.17243614	3.1968127	20	2 21.7	20.7
340802	2006	<i>TD</i> ₇₀	15.2	X	118.55483	159.91614	238.58785	15.40395	0.0830125	0.17010773	3.2259182	20	2 11.7	20.2
340803	2006	<i>TC</i> ₇₁	16.3	X	109.82347	174.06342	247.49683	5.23334	0.1748851	0.17195381	3.2027879	20	3 15.7	21.1
340804	2006	<i>TR</i> ₇₈	14.9	X	16.63029	49.31135	20.61380	16.49940	0.0902809	0.15445879	3.4402840	20	—	—
340805	2006	<i>TY</i> ₉₈	15.5	X	68.50419	267.12960	181.37739	18.46605	0.1647564	0.17149866	3.2084521	20	2 24.9	19.7
340806	2006	<i>TQ</i> ₁₀₃	15.5	X	34.27118	166.01189	210.28317	9.62778	0.1175531	0.14880914	3.5268174	20	12 25.6	20.5
340807	2006	<i>TO</i> ₁₀₅	15.9	X	210.53714	244.24561	59.93075	5.98704	0.1277270	0.17140862	3.2095756	20	2 3.6	21.0
340808	2006	<i>TF</i> ₁₁₁	15.4	X	261.80788	215.94317	59.70175	11.72755	0.1945838	0.18021176	3.1041829	20	2 14.2	20.5
340809	2006	<i>UA</i> ₃	15.0	X	284.35647	156.30018	197.60762	12.74471	0.1999222	0.12280496	4.0085943	20	6 7.2	20.7
340810	2006	<i>UY</i> ₄	16.0	X	229.00898	271.29829	32.46089	10.68091	0.0592679	0.17627724	3.1502032	20	2 26.2	20.8
340811	2006	<i>UR</i> ₁₁	15.7	X	113.81460	145.91301	198.57642	7.17646	0.1283938	0.15996943	3.3608158	20	—	—
340812	2006	<i>UM</i> ₂₀	16.4	X	75.17129	99.44368	5.71489	4.59414	0.1247016	0.17271621	3.1933559	20	3 22.5	20.5
340813	2006	<i>UD</i> ₂₆	15.6	X	197.35596	318.08170	5.57911	14.20895	0.0478431	0.17671121	3.1450435	20	2 16.6	20.4
340814	2006	<i>UR</i> ₂₉	15.8	X	251.94763	254.79617	25.66345	9.56841	0.0269597	0.17372186	3.1810201	20	2 26.3	20.4
340815	2006	<i>UU</i> ₅₅	16.2	X	5.16271	316.83495	257.92063	8.59386	0.0311004	0.18939812	3.0029789	20	4 19.8	20.4
340816	2006	<i>UE</i> ₅₆	15.9	X	123.33804	164.94348	225.01094	8.03052	0.0922778	0.17476310	3.1683725	20	2 10.9	20.7
340817	2006	<i>UE</i> ₈₀	15.8	X	68.14693	63.50498	49.78052	10.43973	0.0877568	0.17259519	3.1948485	20	3 22.8	20.2
340818	2006	<i>UQ</i> ₈₂	15.2	X	148.08516	359.08525	19.48800	10.44248	0.0445193	0.17116317	3.2126432	20	2 27.1	20.0
340819	2006	<i>UT</i> ₈₇	15.4	X	7.61604	61.18256	46.26590	10.92420	0.0923067	0.15479311	3.4353287	20	—	—
340820	2006	<i>UU</i> ₉₆	16.1	X	105.05684	333.68780	89.20990	3.54820	0.0842027	0.17079103	3.2173082	20	3 4.4	20.6
340821	2006	<i>UQ</i> ₁₁₀	15.6	X	63.75495	249.88689	198.17707	15.83326	0.1321734	0.17167687	3.2062314	20	2 11.3	19.9
340822	2006	<i>UT</i> ₁₂₅	16.1	X	149.04152	292.87623	13.48193	9.61211	0.1353323	0.16018656	3.3577781	20	—	—
340823	2006	<i>UY</i> ₁₃₁	16.1	X	142.28440	353.50868	27.65635	10.97443	0.1318309	0.17362197	3.1822400	20	3 3.3	21.1
340824	2006	<i>UN</i> ₁₄₇	15.4	X	117.52901	229.50843	157.36036	27.91285	0.2025523	0.17526663	3.1623012	20	2 16.6	20.3
340825	2006	<i>UL</i> ₁₄₈	15.8	X	218.61649	286.95333	9.82843	16.38182	0.1984039	0.17924555	3.1153281	20	2 3.9	21.3
340826	2006	<i>UF</i> ₁₅₂	15.3	X	93.20697	242.24326	166.52056	20.17558	0.2328815	0.16434520	3.3008924	20	2 20.8	20.1
340827	2006	<i>UR</i> ₁₇₅	15.9	X	183.66531	280.22121	60.52086	9.82333	0.1751065	0.17702748	3.1412965	20	2 24.5	21.2
340828	2006	<i>UU</i> ₁₇₅	15.8	X	80.47649	79.16959	36.57647	12.21507	0.0662714	0.17899716	3.1182095	20	4 5.7	20.1
340829	2006	<i>UD</i> ₂₀₉	15.8	X	266.50497	197.46207	62.39690	5.83554	0.1115212	0.17172130	3.2056783	20	2 7.0	20.6
340830	2006	<i>UU</i> ₂₄₁	16.1	X	105.79350	217.62525	203.59924	7.97165	0.2162476	0.17513329	3.1639060	20	3 16.7	20.9
340831	2006	<i>UO</i> ₂₄₂	18.6	X	160.61323	28.29200	351.84370	4.19360	0.0599806	0.32050728	2.1146774	20	2 24.9	21.0
340832	2006	<i>UE</i> ₂₆₂	17.0	X	127.15188	134.28921	253.86210	4.59990	0.1820539	0.30743739	2.1741939	20	2 9.2	19.8
340833	2006	<i>UO</i> ₂₇₀	18.3	X	176.95094	102.78061	220.76677	5.49627	0.1472103	0.31221174	2.1519177	20	1 6.8	21.3
340834	2006	<i>UP</i> ₃₀₆	15.9	X	349.19378	164.55810	9.21716	3.83244	0.0812356	0.17818577	3.1276684	20	2 8.3	20.0
340835	2006	<i>VO</i> ₄	15.0	X	54.99231	166.31800	242.19722	9.02056	0.1520798	0.15552667	3.4245180	20	—	—
340836	2006	<i>VO</i> ₁₃	17.3	X	186.18055	281.86513	45.91008	5.78807	0.3281615	0.31726529	2.1290589	20	2 1.9	21.1
340837	2006	<i>VC</i> ₉₆	18.1	X	97.18645	53.86092	19.05471	3.55836	0.0857333	0.31268382	2.1498052	20	2 17.6	20.3
340838	2006	<i>VL</i> ₁₂₉	14.7	X	22.98552	183.73317	265.64527	15.64280	0.1039011	0.15423657	3.4435877	20	—	—
340839	2006	<i>VB</i> ₁₃₉	17.1	X	218.52742	322.51991	274.32331	6.36193	0.0709596	0.28770810	2.2724866	20	—	—
340840	2006	<i>WF</i> ₁₁	17.6	X	123.20284	71.96452	336.96972	3.34675	0.0961134	0.31402373	2.1436855	20	2 21.3	19.7
340841	2006	<i>WJ</i> ₃₉	15.4	X	170.25963	75.52019	234.00870	9.51468	0.0799149	0.15783668	3.3910232	20	—	—
340842	2006	<i>WT</i> ₆₉	16.0	X	165.94339	63.21541	279.30463	3.44282	0.1458205	0.17139689	3.2097220	20	2 5.7	21.1
340843	2006	<i>WJ</i> ₈₉	17.7	X	268.70789	196.48141	324.02601	2.40782	0.0861312	0.28805972	2.2706369	20	—	—
340844	2006	<i>WK</i> ₁₃₉	18.6	X	184.46423	211.81949	127.20021	1.49079	0.2207625	0.31624926	2.1336165	20	2 7.9	22.0
340845	2006	<i>WY</i> ₁₅₀	14.9	X	270.32579	324.86581	145.35333	8.42494	0.1879939	0.12291418	4.0062193	20	10 10.8	20.5
340846	2006	<i>XH</i> ₂₂	17.8	X	116.99501	301.80613	93.72106	7.25691	0.1850371	0.30961567	2.1639842	20	2 5.9	20.2
340847	2006	<i>XY</i> ₂₆	15.4	X	87.75846	62.88618	107.69717	27.15878	0.3515338	0.17138731	3.2098416	20	7 26.3	20.7
340848	2006	<i>XO</i> ₂₇	17.2	X	131.66162	127.48023	268.61669	3.87026	0.0467453	0.31086326	2.1581906	20	2 5.9	19.6
340849	2006	<i>XJ</i> ₃₁	18.0	X	91.94713	89.79291	289.31629	2.76905	0.1476093	0.30137400	2.2032589	20	—	—
340850	2006	<i>XN</i> ₃₇	17.0	X	202.95161	339.26875	271.94618	6.04723	0.1259953	0.28990953	2.2609679	20	—	—
340851	2006	<i>YZ</i> ₂₉	17.8	X	158.12163	353.54840	18.71133	2.45331	0.1239085	0.30949065	2.1645670	20	2 19.5	20.7
340852	2006	<i>YP</i> ₃₄	17.4	X	199.85959	248.38590	338.30420	6.09006	0.0986938	0.28225325	2.3016719	20	—	—
340853	2006	<i>YN</i> ₄₆	17.4	X	356.79566	257.18197	255.67125	4.73031	0.0889647	0.29936976	2.2130816	20	—	—
340854	2006	<i>YA</i> ₅₄	18.0	X	29.48574	158.89441	304.40790	2.45002	0.0990193	0.29902050	2.2148045	20	—	—
340855	2007	<i>AB</i> ₈	17.4	X	5.82487	81.72631	92.45997	5.23354	0.0643270	0.30553760	2.1831971	20	2 14.9	19.5
340856	2007	<i>AS</i> ₂₃	17.8	X	108.71818	152.27669	253.09233	3.07639	0.1485301	0.30566064	2.1826111	20	2 4.1	20.1
340857	2007	<i>AL</i> ₂₈	17.9	X	180.85647	32.63617	128.24888	2.41031	0.1271992	0.26506305	2.4001401	20	10 1.2	21.3
340858	2007	<i>BQ</i> ₅	17.6	X	80.44804	38.48368	61.26125	3.12520	0.0755821	0.30842949	2.1695290	20	3 1.1	19.8
340859	2007	<i>BQ</i> ₇	16.5	X	112.62970	220.50806	117.94986	27.84429	0.2518079	0.29252353	2.2474783	20	—	—
340860	2007	<i>BL</i> ₁₀	18.1	X	42.25187	180.35523	279.97733	3.57271	0.1173093	0.30063127	2.2068862	20	—	—
340861	2007	<i>BN</i> ₁₇	17.3	X	241.82462	275.17666	256.99298	2.81123	0.1767483	0.27815652	2.3242164	20	12 23.7	19.8
340862	2007	<i>BG</i> ₂₃	17.6	X	305.02301	68.50648	120.00269	4.40271	0.0578720	0.29616677	2.2290091	20	—	—
340863	2007	<i>BH</i> ₂₄	17.6	X	116.73211	227.82785	122.49362	4.52921	0.1857595	0.29538525	2.2329389	20	—	—
340864	2007	<i>BM</i> ₂₄	17.9	X	211.01611	269.96025	301.78954	4.19376	0.0195092	0.28252022	2.3002217	20	—	—
340865	2007	<i>BY</i> ₂₆	17.2	X	33.10595	149.28849	306.31369	7.11103	0.0599915	0.29626325	2.2285251	20	—	—
340866	2007	<i>BF</i> ₂₇	17.6	X	269.79382	213.48759	323.37388	1.92288	0.1721019	0.28379572	2.2933244	20	—	—
340867	2007	<i>BM</i> ₄₉	16.9	X	210.74927	310.08350	255.88522	7.86201	0.1780493	0.27593136	2.3366949	20	12 25.9	20.1
340868	2007	<i>BC</i> ₆₃	17.1	X	124.83666	349.08424	304.98640	5.27807	0.1209737	0.27838275	2.3229570	20	—	—
340869	2007	<i>BJ</i> ₆₉	17.4	X	87.47765</									

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340881 2007 CZ ₂₅	17.5	X	311.66104	231.36165	272.44443	2.94087	0.1363564	0.28578650	2.2826618	20	—	—
340882 2007 CH ₃₆	17.2	X	210.95811	181.90141	356.49844	5.82736	0.1447784	0.27040786	2.3684080	20	11 22.1	20.5
340883 2007 CC ₃₉	17.8	X	19.59990	292.97329	159.17225	2.62490	0.1305065	0.29299351	2.2450743	20	—	—
340884 2007 CA ₄₂	17.4	X	310.66524	168.34595	345.02309	6.88582	0.1401420	0.28602277	2.2814046	20	—	—
340885 2007 CQ ₄₂	17.0	X	27.59156	107.08075	312.13838	2.96478	0.0879849	0.21256627	2.7806083	20	—	—
340886 2007 CR ₄₅	15.0	X	271.32685	309.64610	149.94857	11.66873	0.2293142	0.12496725	3.9622199	20	9 23.8	20.6
340887 2007 CQ ₄₉	17.4	X	71.71073	218.08327	179.51645	5.08206	0.1067442	0.29197077	2.2503141	20	—	—
340888 2007 CY ₅₂	17.4	X	258.17005	213.19854	347.94939	1.87550	0.1531227	0.28361946	2.2942744	20	—	—
340889 2007 CL ₅₃	17.1	X	124.86687	253.01210	350.99322	6.05283	0.1380834	0.26556621	2.3971074	20	11 17.1	20.8
340890 2007 CQ ₅₃	17.3	X	332.87030	191.71533	344.86083	4.41725	0.0888404	0.29603825	2.2296541	20	—	—
340891 Londoncomorch	17.1	X	294.28184	259.70944	293.87365	3.31371	0.1237985	0.28805477	2.2706629	20	—	—
340892 2007 CN ₅₇	17.3	X	26.02668	71.31430	34.25078	6.02569	0.1095650	0.29603556	2.2296676	20	—	—
340893 2007 CQ ₅₇	15.2	X	293.97244	66.36921	13.15913	9.38434	0.2119773	0.12625841	3.9351610	20	9 30.5	20.1
340894 2007 CG ₆₀	17.0	X	236.74449	237.65154	286.29816	4.59168	0.1610387	0.27300354	2.3533717	20	12 5.5	19.9
340895 2007 CH ₆₃	16.9	X	180.52692	138.86216	341.17540	9.78079	0.1694623	0.27008345	2.3703041	20	12 10.4	20.6
340896 2007 CJ ₆₃	16.8	X	224.07861	272.64514	333.38967	9.44129	0.0836496	0.28610328	2.2809766	20	—	—
340897 2007 CQ ₆₄	17.5	X	149.03546	40.93680	299.56579	4.39658	0.1645856	0.29722340	2.2237232	20	1 3.9	20.3
340898 2007 DV ₃	17.7	X	319.74762	334.30602	172.61239	7.84479	0.0367483	0.28732856	2.2744873	20	—	—
340899 2007 DA ₁₅	17.9	X	37.72584	347.10678	98.08808	4.66137	0.1162449	0.29393515	2.2402769	20	—	—
340900 2007 DT ₂₁	17.5	X	10.46286	139.30671	345.56799	4.33504	0.0899598	0.29340205	2.2429897	20	—	—
340901 2007 DU ₂₅	17.2	X	30.19125	327.60728	143.32382	6.03603	0.0502799	0.29402710	2.2398098	20	—	—
340902 2007 DK ₂₆	17.7	X	8.00187	311.38651	124.42881	3.42764	0.0629350	0.28266902	2.2994144	20	—	—
340903 2007 DX ₂₆	17.5	X	15.07681	114.16647	353.28216	7.9286	0.0865105	0.29078510	2.2564270	20	—	—
340904 2007 DE ₃₃	18.0	X	305.27986	115.75386	24.57517	2.24708	0.1060668	0.28188729	2.3036636	20	—	—
340905 2007 DT ₃₃	17.7	X	324.11194	28.76627	144.78935	4.31374	0.0954370	0.29094529	2.2555986	20	—	—
340906 2007 DB ₃₇	17.6	X	336.93526	191.32971	342.17716	5.00119	0.1204714	0.29319081	2.2440670	20	—	—
340907 2007 DC ₃₈	16.8	X	206.05836	245.78919	323.90439	3.65329	0.0917381	0.27263139	2.3555128	20	—	—
340908 2007 DM ₃₈	17.5	X	120.29703	220.92264	27.14420	2.50783	0.1813676	0.25939815	2.4349579	20	11 19.3	21.3
340909 2007 DP ₃₈	17.6	X	145.39616	256.88109	7.13073	7.27043	0.0989272	0.26945184	2.3740067	20	—	—
340910 2007 DT ₄₆	17.8	X	27.93185	275.89747	174.87551	5.10154	0.1460743	0.29266890	2.2467341	20	—	—
340911 2007 DB ₅₂	17.4	X	131.64506	290.80896	331.68383	6.61459	0.0963767	0.26760981	2.3848882	20	12 18.9	20.9
340912 2007 DX ₅₃	13.7	X	321.80664	271.45309	358.70154	24.21482	0.0628824	0.08329801	5.1925374	20	4 25.1	20.6
340913 2007 DH ₆₄	17.4	X	93.80526	118.17235	153.12839	7.73378	0.1595713	0.26177237	2.4202126	20	11 25.4	21.2
340914 2007 DU ₇₂	17.7	X	147.05571	221.95087	21.33751	1.30563	0.1458424	0.26587697	2.3952393	20	12 8.7	21.3
340915 2007 DW ₇₅	17.8	X	183.13218	52.78507	173.92029	2.58035	0.1332737	0.27093570	2.3653308	20	12 25.9	21.3
340916 2007 DM ₈₀	17.4	X	162.63519	89.62498	142.31164	4.05810	0.1207332	0.26950240	2.3737098	20	12 12.3	20.9
340917 2007 DP ₉₁	17.6	X	307.76243	338.13276	147.01746	5.94347	0.0969102	0.28125111	2.3071361	20	—	—
340918 2007 DZ ₉₅	17.0	X	238.95131	163.80577	56.39756	2.96569	0.1693080	0.28078127	2.3100848	20	—	—
340919 2007 DU ₉₆	17.6	X	138.01829	31.23809	178.26478	7.25288	0.1008288	0.25895042	2.4377638	20	10 19.4	21.1
340920 2007 DM ₁₀₅	18.0	X	248.82921	17.61505	198.92621	2.25488	0.1449439	0.28267151	2.2994009	20	—	—
340921 2007 DB ₁₁₁	17.2	X	55.60091	137.19195	174.96699	2.07560	0.1928004	0.26087339	2.4257695	20	12 9.7	20.6
340922 2007 DY ₁₁₁	16.5	X	162.49067	21.68924	203.72117	21.60102	0.0787313	0.26028027	2.4294533	20	12 4.4	20.3
340923 2007 DE ₁₁₂	16.9	X	162.50479	224.46296	17.23897	7.17737	0.0648625	0.26707403	2.3880767	20	12 28.0	20.2
340924 2007 DJ ₁₁₄	15.9	X	348.36604	275.80684	34.07890	12.86096	0.2053727	0.23608889	2.5927005	20	8 18.7	18.4
340925 2007 DG ₁₁₅	13.6	X	270.12565	130.61509	182.50564	25.00529	0.0824713	0.08173358	5.2585867	20	4 22.7	20.7
340926 2007 EP	16.7	X	309.33809	177.18498	304.32421	6.53781	0.0622162	0.27925771	2.3181023	20	—	—
340927 2007 EK ₂	17.0	X	106.94251	298.23425	343.26555	5.66154	0.1218152	0.26594856	2.3948094	20	12 17.5	20.6
340928 2007 EU ₄	18.0	X	129.36666	259.62656	313.95600	1.87965	0.1661687	0.25757488	2.4464352	20	10 14.9	21.9
340929 2007 ET ₉	18.3	X	70.57767	74.24058	355.19143	2.21858	0.1845912	0.29526525	2.2335439	20	1 13.4	19.8
340930 2007 EF ₁₁	17.6	X	342.87257	129.97703	14.37852	2.80143	0.0821418	0.29190897	2.2506316	20	—	—
340931 2007 EH ₁₂	17.2	X	261.99619	189.75412	26.68473	2.54967	0.1770267	0.28610971	2.2809424	20	—	—
340932 2007 EJ ₁₇	16.9	X	184.76466	22.81660	170.12570	7.48699	0.0779195	0.26606157	2.3941312	20	11 21.0	20.2
340933 2007 EQ ₂₀	17.0	X	279.60071	325.69742	153.49513	6.91676	0.0620941	0.27105907	2.3646131	20	12 23.3	19.7
340934 2007 EJ ₂₁	17.5	X	138.07204	91.24578	161.51414	3.49712	0.0942413	0.26603087	2.3943154	20	12 13.4	21.0
340935 2007 EP ₂₁	17.5	X	56.54466	163.68858	169.00111	7.21791	0.1172939	0.27032643	2.3688835	20	12 29.5	20.8
340936 2007 EF ₂₅	17.3	X	232.41076	179.57412	14.85269	1.47248	0.1184004	0.27203335	2.3589638	20	—	—
340937 2007 EV ₃₄	16.8	X	239.90493	215.62745	334.71604	5.90250	0.0417065	0.27535334	2.3399638	20	—	—
340938 2007 EF ₃₇	16.8	X	296.43920	94.23269	183.26073	12.55635	0.2568122	0.22474135	2.6792551	20	3 4.4	20.6
340939 2007 EP ₃₉	17.3	X	55.00878	55.18143	34.00903	6.81518	0.0873750	0.29219849	2.2491447	20	1 5.5	19.5
340940 2007 EK ₄₁	17.3	X	283.04315	187.36083	325.21579	2.79146	0.0922098	0.27885506	2.3203332	20	—	—
340941 2007 EY ₄₃	17.0	X	193.57289	258.20567	355.36153	6.92207	0.1045117	0.27632631	2.3344678	20	—	—
340942 2007 EB ₄₅	16.9	X	215.26516	98.19095	107.27903	5.60148	0.1099054	0.27560804	2.3385220	20	—	—
340943 2007 EC ₄₅	13.1	X	332.74595	247.11957	15.60095	19.57608	0.0270461	0.08257963	5.2226081	20	5 7.3	20.1
340944 2007 EO ₄₅	17.4	X	313.50862	90.07571	27.67948	2.53576	0.1425246	0.27711508	2.3300359	20	—	—
340945 2007 EA ₄₉	17.5	X	182.37515	70.49994	175.03725	4.89784	0.1103569	0.27035080	2.3687412	20	—	—
340946 2007 EO ₅₆	17.6	X	36.87672	78.59460	160.59122	7.55257	0.1616851	0.23844427	2.5755983	20	7 28.2	20.6
340947 2007 EJ ₅₈	17.9	X	62.90349	85.24141	320.79179	1.75425	0.1576805	0.29345004	2.2427452	20	—	—
340948 2007 ES ₆₆	13.5	X	285.24052	292.26602	12.48326	11.86575	0.0793361	0.08320394	5.1964505	20	4 25.8	20.4
340949 2007 EO ₆₈	17.4	X										

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
340961 2007 <i>EW</i> ₉₂	15.5	X	291.41892	186.94252	266.69033	1.72899	0.2380639	0.12685765	3.9227588	20	10 8.7	20.4
340962 2007 <i>ET</i> ₉₈	16.6	X	98.78070	294.55338	8.92455	6.64672	0.1293923	0.26809651	2.3820010	20	—	—
340963 2007 <i>EH</i> ₁₀₁	17.5	X	333.21854	139.63220	32.19274	6.05012	0.0998769	0.29138711	2.2533180	20	—	—
340964 2007 <i>EJ</i> ₁₀₁	17.3	X	114.46631	227.62408	37.33202	7.35621	0.1337527	0.26188687	2.4195071	20	12 3.2	21.1
340965 2007 <i>EA</i> ₁₀₅	17.6	X	354.01273	293.39805	3.44728	5.58681	0.2661178	0.24157308	2.5533108	20	8 11.0	19.1
340966 2007 <i>EG</i> ₁₀₆	13.7	X	336.03566	186.71856	77.45623	5.37086	0.0687788	0.08337961	5.1891490	20	5 16.7	20.3
340967 2007 <i>EA</i> ₁₁₁	17.3	X	30.21175	99.37551	139.05396	5.55566	0.2149180	0.23628501	2.5912657	20	7 24.3	19.8
340968 2007 <i>EL</i> ₁₁₂	16.8	X	46.09738	61.47434	184.81852	11.51554	0.2445159	0.23892651	2.5721314	20	9 4.7	20.1
340969 2007 <i>EF</i> ₁₁₆	17.3	X	230.29865	143.19219	39.88147	7.13808	0.1979827	0.26998391	2.3708867	20	12 15.5	20.4
340970 2007 <i>EP</i> ₁₁₇	17.0	X	359.88129	230.21355	51.46524	6.17493	0.2351104	0.23550914	2.5969537	20	7 28.4	19.0
340971 2007 <i>EY</i> ₁₁₇	17.2	X	278.70888	348.29673	164.44541	5.43947	0.1066293	0.27410637	2.3470552	20	—	—
340972 2007 <i>EM</i> ₁₃₀	17.7	X	89.27429	228.95685	173.59028	3.12950	0.1551502	0.29200495	2.2501385	20	1 4.2	19.7
340973 2007 <i>EF</i> ₁₃₇	17.5	X	274.57757	281.65841	185.18508	5.86496	0.0947163	0.27186483	2.3599385	20	11 25.8	20.1
340974 2007 <i>EF</i> ₁₃₇	17.2	X	44.41602	4.85264	109.64524	8.36988	0.1662186	0.29810622	2.2193307	20	1 24.9	18.5
340975 2007 <i>EG</i> ₁₄₁	17.2	X	34.28306	10.03672	307.08433	3.06772	0.1380240	0.25616150	2.4554258	20	11 10.5	20.2
340976 2007 <i>EH</i> ₁₆₇	17.5	X	6.88484	60.63384	357.65709	7.57003	0.0884396	0.28096454	2.3087046	20	—	—
340977 2007 <i>EM</i> ₁₆₇	16.7	X	161.21565	218.65581	28.29600	11.51782	0.2093957	0.26664138	2.3906593	20	12 22.7	20.8
340978 2007 <i>ET</i> ₁₆₇	17.7	X	257.43120	11.80184	199.61615	5.35661	0.1486166	0.28271092	2.2991872	20	—	—
340979 2007 <i>EF</i> ₁₆₉	17.8	X	231.47918	140.37018	48.20558	3.08264	0.1407671	0.27117927	2.3639143	20	—	—
340980 2007 Bad Vilbel	16.9	X	67.69580	178.14562	99.86749	7.58167	0.1255508	0.25525909	2.4612095	20	11 3.2	20.4
340981 2007 <i>EC</i> ₁₇₅	17.4	X	302.34348	261.03908	251.74201	1.59770	0.1538862	0.28102938	2.3083495	20	—	—
340982 2007 <i>EB</i> ₁₇₆	17.8	X	215.05252	333.30480	190.84003	5.77352	0.0662572	0.26349885	2.4096293	20	11 20.5	20.9
340983 2007 <i>EC</i> ₁₈₁	16.4	X	336.11273	271.95587	13.31827	13.23914	0.1687752	0.23308978	2.6148929	20	5 30.3	19.3
340984 2007 <i>EW</i> ₁₈₂	17.3	X	154.81003	335.25453	248.87778	2.22100	0.0622728	0.26096912	2.4251763	20	11 25.1	20.7
340985 2007 <i>ED</i> ₁₈₃	17.7	X	40.37240	35.58921	27.10441	2.90901	0.1239323	0.28839343	2.2688849	20	—	—
340986 2007 <i>ET</i> ₁₈₅	17.4	X	310.15266	81.01503	78.28530	6.59304	0.1051279	0.28258321	2.2998798	20	—	—
340987 2007 <i>EY</i> ₁₉₁	18.2	X	312.58697	139.11085	6.50242	5.07022	0.0897551	0.28121378	2.3073403	20	—	—
340988 2007 <i>EM</i> ₁₉₂	17.2	X	11.43825	304.06657	24.43362	4.45079	0.1818681	0.25388122	2.4701064	20	10 29.7	19.6
340989 2007 <i>EU</i> ₁₉₂	17.5	X	341.24086	133.01412	162.75315	4.95646	0.3442103	0.23529309	2.5985432	20	6 14.2	18.7
340990 2007 <i>EB</i> ₁₉₈	17.5	X	123.90736	355.54971	248.67394	1.95143	0.1264534	0.25815364	2.4427773	20	11 16.7	21.3
340991 2007 <i>EH</i> ₁₉₈	16.9	X	70.53495	275.76128	60.25811	7.21884	0.1243308	0.26315440	2.4117315	20	—	—
340992 2007 <i>EJ</i> ₁₉₈	13.1	X	252.75134	279.23345	72.94382	6.48212	0.0244360	0.07968660	5.3482602	20	5 22.9	20.1
340993 2007 <i>EL</i> ₁₉₉	15.6	X	250.26712	122.87127	62.13144	23.61363	0.1622091	0.27880648	2.3206028	20	—	—
340994 2007 <i>EA</i> ₂₁₀	17.5	X	223.90109	159.41954	47.06582	3.20724	0.1805617	0.27677992	2.3319165	20	—	—
340995 2007 <i>EK</i> ₂₁₂	17.2	X	14.21125	36.10610	101.60720	5.64687	0.0511936	0.29543820	2.2326721	20	1 7.4	19.5
340996 2007 <i>EL</i> ₂₁₄	17.7	X	60.64187	331.62249	358.72316	4.03095	0.1375421	0.26767864	2.3844794	20	—	—
340997 2007 <i>EO</i> ₂₁₅	17.1	X	223.61825	249.88076	288.14383	4.48028	0.0781851	0.27169705	2.3609100	20	12 19.5	19.9
340998 2007 <i>EP</i> ₂₁₅	17.5	X	284.78418	304.20120	220.20113	5.47071	0.1263993	0.28183585	2.3039439	20	—	—
340999 2007 <i>EV</i> ₂₁₆	16.3	X	7.96865	142.01401	111.18937	13.73965	0.2497441	0.23529122	2.5985569	20	6 30.8	18.1
341000 2007 <i>EK</i> ₂₂₀	17.3	X	172.95507	232.38617	21.91761	6.83175	0.0836933	0.27218139	2.3581084	20	—	—
341001 2007 <i>FP</i> ₂	16.0	X	352.12924	234.94423	23.67826	31.28823	0.2852038	0.23236526	2.6203256	20	5 4.8	18.3
341002 2007 <i>FP</i> ₁₆	17.8	X	178.25274	58.74430	177.18204	1.18917	0.1541063	0.27326814	2.3518523	20	12 30.8	21.1
341003 2007 <i>FO</i> ₂₀	17.1	X	73.74996	144.20723	175.02386	6.17737	0.1224465	0.26553504	2.3972950	20	12 30.6	20.6
341004 2007 <i>FB</i> ₂₃	13.5	X	320.46099	261.02874	25.03303	12.55663	0.0576126	0.08422495	5.1543694	20	5 19.5	20.3
341005 2007 <i>FD</i> ₂₄	17.1	X	85.78143	284.02316	26.76985	6.49009	0.1316948	0.26418514	2.4054544	20	—	—
341006 2007 <i>FY</i> ₂₄	17.8	X	273.42384	6.67227	163.69721	1.21620	0.0894124	0.27798334	2.3251816	20	—	—
341007 2007 <i>FU</i> ₂₇	17.0	X	106.73411	2.95612	346.27001	6.88912	0.1272460	0.28247623	2.3004605	20	—	—
341008 2007 <i>FH</i> ₃₀	13.9	X	319.40183	272.47482	11.71243	6.70438	0.0591929	0.08303526	5.2034857	20	5 17.0	20.6
341009 2007 <i>FC</i> ₃₁	17.5	X	231.23290	355.17985	195.05972	2.45913	0.1649410	0.27151100	2.3619884	20	—	—
341010 2007 <i>FT</i> ₃₁	17.2	X	135.37040	18.75056	217.96291	0.70203	0.1458707	0.25851572	2.4404959	20	11 18.8	20.8
341011 2007 <i>FY</i> ₃₃	17.4	X	55.07382	269.16619	3.10786	6.40356	0.1448721	0.25102560	2.4888040	20	10 9.2	20.5
341012 2007 <i>FF</i> ₃₄	17.5	X	345.16773	238.01532	184.50998	5.72411	0.0976938	0.27319097	2.3522952	20	—	—
341013 2007 <i>FL</i> ₃₄	17.6	X	191.58298	152.66738	86.92556	4.35951	0.1204694	0.27180670	2.3602750	20	—	—
341014 2007 <i>FN</i> ₃₉	17.4	X	271.89802	266.02033	255.89717	3.94247	0.1634123	0.27601845	2.3362034	20	—	—
341015 2007 <i>FG</i> ₄₄	13.9	X	214.76306	183.97204	176.96249	4.10151	0.0497296	0.08158737	5.2648671	20	4 20.2	21.1
341016 2007 <i>FV</i> ₄₇	16.8	X	32.64454	23.60064	91.85484	6.24615	0.0928349	0.29162597	2.2520875	20	1 4.0	18.7
341017 2007 <i>FZ</i> ₄₈	13.4	X	228.81105	337.76705	34.89789	8.68141	0.1092460	0.08079537	5.2992172	20	5 11.1	20.7
341018 2007 <i>GX</i> ₄₈	17.7	X	195.15112	135.53349	71.63674	5.59504	0.1959022	0.27059229	2.3673316	20	12 11.1	21.0
341019 2007 <i>GA</i> ₂	17.5	X	314.77573	61.46785	93.08588	5.83464	0.0873825	0.28320358	2.2965200	20	—	—
341020 2007 <i>GS</i> ₂	17.6	X	65.71073	90.80405	191.32393	2.31922	0.1676605	0.25549595	2.4596880	20	11 8.9	20.9
341021 2007 <i>GS</i> ₆	13.9	X	305.98610	288.04921	8.46527	5.14193	0.0731406	0.08416177	5.1569488	20	5 13.2	20.5
341022 2007 <i>GW</i> ₆	18.1	X	128.10994	159.96788	82.27038	0.22521	0.1671103	0.25917913	2.4363295	20	11 19.2	21.9
341023 2007 <i>GX</i> ₆	13.6	X	279.80812	297.21066	11.96026	11.66093	0.0654080	0.08175036	5.2578669	20	4 26.4	20.6
341024 2007 <i>GF</i> ₈	18.0	X	171.10860	19.80476	196.25817	4.63589	0.1216192	0.26385083	2.4074858	20	11 30.1	21.5
341025 2007 <i>GZ</i> ₁₀	13.5	X	241.10605	175.12702	169.12160	17.46903	0.0291343	0.08374374	5.1740959	20	5 3.5	20.6
341026 2007 <i>GK</i> ₁₅	13.9	X	285.63963	118.83974	179.45423	23.45478	0.1162523	0.08243167	5.2288555	20	4 1	

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341041 2007 GS ₅₃	17.1	X	251.48602	358.48417	169.87831	5.90687	0.0401533	0.26709324	2.3879622	20	—	—
341042 2007 GX ₅₉	17.6	X	263.28748	205.17406	288.02043	0.84392	0.1355951	0.26641942	2.3919869	20	12 6.2	20.2
341043 2007 GC ₆₃	16.5	X	154.05664	132.08710	232.50759	5.17609	0.0698267	0.21214876	2.7842553	20	2 8.4	20.7
341044 2007 GP ₆₅	17.1	X	347.49780	19.99764	253.96566	2.49385	0.1834787	0.23130186	2.6283506	20	6 9.5	19.5
341045 2007 GF ₆₇	16.7	X	256.47675	217.63553	223.82700	7.98571	0.0589730	0.25068198	2.4910779	20	9 20.0	19.9
341046 2007 GT ₆₈	17.7	X	101.92194	67.82421	195.58655	2.13658	0.1608113	0.25785004	2.4446944	20	11 21.3	21.4
341047 2007 GF ₇₀	17.0	X	166.40450	235.38091	21.57057	6.74584	0.0937432	0.27099150	2.3650061	20	—	—
341048 2007 GG ₇₁	17.1	X	210.22001	58.68225	158.67789	4.28948	0.1525724	0.27099001	2.3650148	20	—	—
341049 2007 HE	17.0	X	29.56784	163.14713	127.17228	4.21834	0.2140441	0.24369442	2.5384717	20	10 11.0	19.9
341050 2007 HZ	20.2	X	283.33377	259.13493	208.33305	7.41954	0.1426271	0.64320755	1.3291336	20	—	—
341051 2007 HN ₁	16.1	X	317.81850	244.01251	30.92248	13.22413	0.2448537	0.22579077	2.6709470	20	4 5.1	19.1
341052 2007 HW ₁	14.0	X	305.84095	258.91634	22.59881	5.05076	0.0474015	0.07943194	5.3596850	20	4 29.8	21.0
341053 2007 HS ₂	17.3	X	126.78828	65.14281	194.91559	1.92211	0.1615980	0.25935805	2.4352089	20	12 9.8	21.1
341054 2007 HC ₄	16.8	X	310.75511	189.74759	121.37491	3.99934	0.2270047	0.22811268	2.6527914	20	5 15.9	19.8
341055 2007 HT ₅	16.6	X	213.55449	152.18114	63.35793	6.76015	0.1736361	0.27214017	2.3583465	20	—	—
341056 2007 HC ₈	16.5	X	36.55763	163.77532	201.93260	9.26560	0.2223265	0.26495196	2.4008109	20	—	—
341057 2007 HE ₈	17.9	X	103.52099	84.11326	178.06865	0.83590	0.1505178	0.25630607	2.4545024	20	11 20.3	21.6
341058 2007 HR ₁₂	16.3	X	251.02528	281.51075	39.55118	15.77051	0.3036838	0.21655997	2.7463166	20	3 20.0	21.2
341059 2007 HQ ₁₃	17.9	X	304.34188	186.38843	335.78004	2.68702	0.0645575	0.28424874	2.2908871	20	—	—
341060 2007 HF ₂₁	17.9	X	353.46435	81.16175	27.10375	3.19491	0.1622839	0.28088987	2.3091137	20	—	—
341061 2007 HO ₂₁	16.7	X	41.81310	277.21181	338.68103	4.18155	0.2231695	0.24020124	2.5630233	20	9 9.9	19.6
341062 2007 HW ₂₄	17.5	X	0.27747	289.38928	156.04328	3.32540	0.0322700	0.27194671	2.3594648	20	—	—
341063 2007 HM ₂₈	16.7	X	294.98677	80.18926	109.13123	6.02089	0.1018226	0.28523507	2.2856029	20	—	—
341064 2007 HU ₃₃	16.5	X	319.63871	96.98277	223.97020	6.28974	0.2162630	0.23358910	2.6111651	20	6 17.2	19.1
341065 2007 HL ₃₇	18.2	X	310.23902	39.13050	100.56391	4.39169	0.1534612	0.27971414	2.3155799	20	—	—
341066 2007 HK ₄₃	17.0	X	103.03679	239.22640	66.02094	6.84966	0.1051891	0.26332059	2.4107167	20	—	—
341067 2007 HD ₄₆	16.3	X	3.66199	269.04213	54.19311	15.39217	0.2262802	0.24235353	2.5478263	20	10 18.3	18.9
341068 2007 HN ₄₆	16.0	X	316.32962	237.80415	54.50218	12.45316	0.2004773	0.23023358	2.6364747	20	5 3.1	18.8
341069 2007 HE ₅₁	17.2	X	289.03532	3.65095	120.82309	3.61912	0.0267386	0.26616188	2.3935296	20	—	—
341070 2007 HR ₅₂	17.1	X	71.33670	43.35055	175.26559	7.43920	0.1423797	0.23904514	2.5712804	20	8 16.1	20.6
341071 2007 HA ₅₃	16.9	X	346.19902	241.45278	51.80072	31.37972	0.2850908	0.23127427	2.6285596	20	6 27.2	19.4
341072 2007 HW ₅₃	17.6	X	270.67808	341.46141	169.97925	6.38757	0.1710607	0.27388784	2.3483034	20	—	—
341073 2007 HJ ₅₆	17.5	X	350.18399	245.23678	58.01647	5.40360	0.1972291	0.23683031	2.5872866	20	8 6.4	19.7
341074 2007 HN ₆₂	18.0	X	341.78130	212.76487	239.93633	0.66329	0.1485758	0.27562830	2.3384074	20	—	—
341075 2007 HE ₆₇	16.6	X	256.14772	40.74419	114.31719	7.77827	0.0456161	0.26398601	2.4066639	20	—	—
341076 2007 HG ₆₉	16.7	X	35.04925	313.61973	33.37914	8.07430	0.1306963	0.25956071	2.4339412	20	12 21.4	19.9
341077 2007 HA ₇₅	16.4	X	300.69097	296.89951	55.55288	10.49261	0.1069344	0.23752842	2.5822146	20	7 18.5	19.6
341078 2007 HK ₇₅	17.4	X	50.71171	97.54632	211.24107	7.79388	0.0414047	0.25310550	2.4751508	20	11 7.6	20.4
341079 2007 HK ₈₃	16.9	X	22.08002	37.62856	269.34617	3.07157	0.2640943	0.24330749	2.5411623	20	10 27.5	19.8
341080 2007 HT ₈₃	16.6	X	302.32723	116.74913	181.79761	12.69862	0.2721031	0.22431628	2.6826387	20	4 8.3	20.1
341081 2007 HZ ₈₃	17.3	X	210.99643	304.99193	269.95959	1.42459	0.1433359	0.27125439	2.3634778	20	—	—
341082 2007 HF ₈₆	17.7	X	316.16722	75.73525	207.87012	13.10395	0.1845241	0.22466929	2.6798279	20	4 22.1	20.6
341083 2007 HJ ₈₇	17.4	X	243.78511	128.14047	76.44700	6.02756	0.1198530	0.27293496	2.3537659	20	—	—
341084 2007 HD ₉₀	16.0	X	290.75276	133.04059	139.13145	12.34863	0.1193835	0.22062471	2.7124804	20	3 14.9	19.8
341085 2007 HD ₉₂	17.0	X	0.91692	11.75491	249.06060	2.66639	0.1505142	0.23180769	2.6245257	20	6 19.3	19.6
341086 2007 HJ ₉₇	16.7	X	67.53838	88.43896	143.17515	6.19084	0.1301618	0.23983312	2.5656453	20	8 29.2	19.9
341087 2007 HN ₉₇	16.4	X	179.04998	22.36914	113.96328	6.89451	0.0345720	0.24604745	2.5222616	20	8 31.7	19.8
341088 2007 JY ₁	16.2	X	22.23957	206.78783	87.81665	6.70218	0.2855157	0.23865161	2.5741062	20	10 17.7	19.1
341089 2007 JK ₂	16.5	X	343.86914	129.24337	164.38017	13.84385	0.1559974	0.23173151	2.6251008	20	7 3.4	19.4
341090 2007 JO ₂	16.8	X	118.83638	336.76181	224.81737	3.77207	0.0990116	0.24532897	2.5271838	20	9 13.7	20.5
341091 2007 JQ ₂	15.7	X	284.64005	264.55325	55.06535	14.28512	0.2418201	0.22283255	2.6945337	20	4 21.1	19.5
341092 2007 JQ ₄	16.9	X	207.68853	327.48465	199.88550	5.00848	0.0915805	0.25815590	2.4427630	20	11 10.7	20.1
341093 2007 JZ ₄	16.4	X	346.53570	202.38447	130.28463	16.39220	0.1668802	0.23801459	2.5786971	20	9 16.1	19.0
341094 2007 JK ₉	16.3	X	63.66101	113.63447	135.66016	5.55561	0.1177351	0.24401296	2.5362620	20	9 16.9	19.7
341095 2007 JY ₉	16.0	X	25.68523	9.38344	246.03705	14.04226	0.0762152	0.23387625	2.6090274	20	7 17.4	19.4
341096 2007 JF ₁₀	17.2	X	148.53007	152.67573	73.66841	2.47720	0.1369791	0.25901663	2.4373484	20	11 18.7	20.8
341097 2007 JL ₁₃	17.4	X	324.54383	79.96422	39.50725	7.87579	0.0606947	0.27273560	2.3549128	20	—	—
341098 2007 JO ₂₂	17.2	X	321.99439	83.39720	199.58616	3.67286	0.2468309	0.22434726	2.6823917	20	4 20.9	20.2
341099 2007 JQ ₂₄	16.9	X	225.54977	20.22363	157.88769	12.53873	0.0389660	0.26211546	2.4181002	20	12 25.8	20.2
341100 2007 JX ₂₈	17.4	X	56.89981	8.35464	248.83460	2.37411	0.1846493	0.24178426	2.5518239	20	9 25.5	20.9
341101 2007 JH ₃₀	16.2	X	326.39631	47.52307	226.98164	18.03581	0.2124135	0.22655200	2.6649606	20	4 20.6	19.3
341102 2007 JT ₃₆	17.9	X	159.23978	201.97470	35.08771	1.70720	0.1473665	0.26365410	2.4086833	20	12 12.1	21.6
341103 2007 JW ₄₀	15.8	X	344.06632	232.50668	96.21216	14.12989	0.1834447	0.23896393	2.5718629	20	9 7.4	18.4
341104 2007 KM ₁	17.4	X	356.73489	186.56996	195.74236	4.54413	0.0894295	0.25459840	2.4654656	20	12 7.8	20.2
341105 2007 KK ₄	17.0	X	15.14542	98.61529	175.26605	12.84249	0.2517586	0.23673398	2.5879883	20	8 21.5	19.4
341106 2007 KN ₆	17.2	X	334.68800	224.44403	61.96204	4.62421	0.1765044	0.22897226	2.6461481	20	5 31.8	19.5
341107 2007 KA ₇	16.3	X	13.37595	227.40053	62.10186	10.12148	0.1348148	0.23761852	2.5815618	20	9 2.1	19.3
341108 2007 KZ ₇	16.2	X	40.67163	342.83572	217.67658	13.08422	0.1924585	0.22923772	2.6441048	20	6 12.8	19.2
341109 2007 LQ	16.5	X	73.58920	54.90604	165.48611	7.15280	0.1900781	0.23936618	2.5689808	20	8 29.1	19.9
341110 2007 LE ₂	17.9	X	25.95367	85.87760	187.83064	5.76259	0.1303746	0.23714736	2.5849800	20	8 23.6	20.8
341111 2007 LY ₂	16.6	X	251.62085	201.66319	152.92256	13.69625	0.2243377	0.22461953	2.6802237	20	5 3.2	21.1
341112 2007 LS ₃	16.5	X	339.57481	167.47804	199.17568	5.29092	0.2337284	0.24323822	2.5416447	20	10 25.6	18.3
341113 2007 LT ₅	17.1	X	19.19505	140.65750	170.92384	6.28346	0.1167181	0.24269897	2.5454081	20	10 7.5	20.1
341114 2007 LV ₆	17.0	X	249.21143	43.52220	138.10967	5.10684	0.1976464	0.27059781	2.3672995			

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341121 2007 LS ₂₀	16.8	X	353.99548	116.89890	215.10829	5.35267	0.1719915	0.24027891	2.5624709	20	9 25.2	19.3
341122 2007 LF ₂₈	16.3	X	61.37027	100.12100	165.12538	8.25195	0.0669008	0.24347282	2.5400118	20	9 27.1	19.6
341123 2007 LO ₂₈	16.3	X	319.55617	233.30940	128.42171	10.16166	0.1158279	0.24004308	2.5641490	20	9 3.8	19.0
341124 2007 LR ₃₃	16.2	X	305.18996	156.70626	112.53705	18.07253	0.2928145	0.21493351	2.7601539	20	3 7.3	20.3
341125 2007 MC	16.9	X	14.89999	214.97969	67.87001	7.44731	0.2046180	0.23139057	2.6276788	20	9 2.2	19.6
341126 2007 ME	16.0	X	330.04812	48.36226	308.24844	13.27559	0.1129038	0.23430610	2.6058354	20	9 5.9	19.1
341127 2007 MM	16.7	X	304.96356	310.34119	9.95363	5.18409	0.1631587	0.21709275	2.7418215	20	5 27.6	20.1
341128 2007 MZ ₁	17.2	X	310.07936	107.37834	182.42672	8.90586	0.1688206	0.21421601	2.7663137	20	4 25.6	20.6
341129 2007 MX ₄	16.5	X	287.22671	216.19821	118.23681	14.54839	0.1842896	0.22650245	2.6653492	20	5 23.0	20.2
341130 2007 MF ₅	17.0	X	316.81941	84.84164	166.52008	9.01476	0.2201921	0.21857980	2.7293718	20	3 4.6	20.2
341131 2007 MW ₅	16.7	X	317.62158	239.13461	104.52863	5.38471	0.1093566	0.22911289	2.6450651	20	8 1.5	19.5
341132 2007 MD ₁₂	17.0	X	249.99900	115.30580	268.23238	2.41930	0.1208491	0.22078850	2.7111388	20	6 15.2	20.8
341133 2007 ME ₁₃	16.7	X	319.28065	197.17285	118.55233	14.67861	0.1743454	0.23183092	2.6243503	20	6 16.7	19.6
341134 2007 MK ₂₀	16.5	X	323.16375	149.05626	137.48477	13.41969	0.1899792	0.22718932	2.6599743	20	5 12.7	19.7
341135 2007 OE	15.5	X	260.35630	57.69266	316.89746	24.71496	0.1904395	0.21530962	2.7569386	20	6 6.4	20.1
341136 2007 OW ₄	16.4	X	330.40545	329.89603	340.03261	12.58850	0.1522567	0.22306220	2.6926840	20	7 3.0	19.5
341137 2007 OW ₇	16.0	X	238.68072	56.69923	299.44137	11.26540	0.1402877	0.21009195	2.8023977	20	4 21.2	20.5
341138 2007 OX ₁₀	16.3	X	321.95093	175.18598	148.04515	7.96979	0.1041516	0.22249932	2.6972234	20	7 8.9	19.6
341139 2007 PB ₅	16.4	X	21.70312	345.83876	307.87766	3.52162	0.2035590	0.23235675	2.6203895	20	9 24.7	19.3
341140 2007 PL ₅	15.9	X	285.96409	338.75163	334.75064	14.77724	0.2757273	0.21303878	2.7764953	20	3 31.4	20.3
341141 2007 PR ₆	15.5	X	313.57086	296.62402	346.10151	24.56218	0.1286813	0.21196985	2.7858218	20	4 12.3	19.5
341142 2007 PN ₁₀	16.4	X	260.70242	23.44459	318.04096	3.80719	0.1398453	0.21266289	2.7797660	20	4 29.9	20.6
341143 2007 PM ₁₄	15.9	X	44.97898	300.96416	325.06254	13.88105	0.0418568	0.23146097	2.6271460	20	8 27.8	19.4
341144 2007 PA ₁₅	15.7	X	284.04593	316.38931	341.99536	9.74239	0.1883259	0.21071719	2.7968514	20	3 25.7	19.7
341145 2007 PR ₁₅	16.1	X	269.45219	338.25933	2.69674	8.05687	0.20303980	0.21338318	2.7735070	20	4 26.9	20.4
341146 2007 PV ₁₆	15.8	X	256.54802	318.65799	4.85965	17.96907	0.2173711	0.20589133	2.8403859	20	3 27.4	20.3
341147 2007 PV ₁₉	16.9	X	255.61627	349.76214	347.38654	0.73328	0.2466673	0.21021730	2.8012836	20	4 9.4	21.5
341148 2007 PK ₂₈	16.5	X	272.54564	97.76807	234.44928	14.89319	0.3759206	0.21411082	2.7672197	20	4 2.1	21.3
341149 2007 PL ₂₈	16.8	X	333.03985	62.75952	188.92067	14.26969	0.1236354	0.21035461	2.8000645	20	4 16.8	20.1
341150 2007 PA ₂₉	15.5	X	219.54366	317.67157	34.61304	15.72040	0.1577112	0.20323458	2.8650859	20	4 6.1	20.2
341151 2007 PZ ₂₉	15.7	X	291.23902	28.18163	353.39694	12.96490	0.1701038	0.22297430	2.6933916	20	8 5.6	19.1
341152 2007 PH ₃₀	16.5	X	283.20886	172.27816	123.01719	4.72567	0.1994109	0.20928100	2.8096325	20	3 24.3	20.5
341153 2007 PE ₃₁	15.8	X	259.79371	17.83612	300.91625	12.85163	0.1942456	0.21013665	2.8020003	20	3 20.3	20.5
341154 2007 PJ ₃₁	16.5	X	237.30498	203.57844	170.19671	8.37017	0.2300481	0.21142397	2.7906149	20	5 11.5	21.2
341155 2007 PF ₃₆	16.2	X	295.85883	196.32442	143.17308	14.80875	0.1888875	0.22116689	2.7080456	20	6 8.9	19.9
341156 2007 PR ₄₀	16.0	X	259.05773	340.95179	319.54117	14.59032	0.1354504	0.20648812	2.8349104	20	3 5.8	20.4
341157 2007 PZ ₄₀	16.5	X	262.55505	215.96793	163.71734	9.19948	0.2684142	0.21722755	2.7406871	20	6 6.9	20.9
341158 2007 PD ₄₅	16.8	X	276.41278	114.93824	174.72358	2.03857	0.0275246	0.20373006	2.8604387	20	3 31.4	20.8
341159 2007 PG ₄₅	16.8	X	229.24961	199.82034	148.59867	2.73686	0.1002202	0.20554569	2.8435692	20	4 11.5	21.0
341160 2007 PW ₄₆	16.0	X	283.78095	239.07906	83.29823	14.43457	0.2059779	0.21308526	2.7760915	20	4 30.8	20.1
341161 2007 PE ₄₇	16.6	X	213.93013	76.65886	337.47678	4.03720	0.1268820	0.21213246	2.7843979	20	6 11.6	21.0
341162 2007 PW ₄₈	16.6	X	257.98283	5.69659	333.10533	3.82467	0.0835503	0.21173556	2.7878764	20	4 30.5	20.7
341163 2007 PM ₄₉	16.7	X	133.50380	50.97762	151.41073	13.64981	0.0949231	0.23691439	2.5866744	20	10 4.4	20.7
341164 2007 QY ₉	16.1	X	260.17025	357.08583	6.01805	5.07132	0.1732420	0.21278787	2.7786775	20	5 23.3	20.2
341165 2007 QO ₁₃	16.7	X	191.01578	260.44872	112.91438	2.94735	0.0939201	0.20058655	2.8902462	20	4 3.8	21.1
341166 2007 QW ₁₃	16.7	X	205.15632	157.14192	215.26915	1.28608	0.0825384	0.20387692	2.8590649	20	4 15.7	21.0
341167 2007 QA ₁₄	16.6	X	269.98746	185.01312	205.84363	1.31035	0.0724579	0.22081506	2.7109214	20	7 27.9	20.2
341168 2007 QC ₁₄	16.8	X	243.29591	22.83291	353.66313	5.65803	0.0411519	0.21278998	2.7786591	20	6 7.1	20.8
341169 2007 QD ₁₄	16.9	X	266.81900	5.47162	352.60692	6.01845	0.0574890	0.21411911	2.7671483	20	6 10.9	20.7
341170 2007 QE ₁₄	16.9	X	183.94402	15.44460	357.90601	4.48876	0.0971348	0.19908095	2.9048000	20	3 25.9	21.3
341171 2007 QG ₁₆	16.4	X	291.35521	14.68603	340.86308	4.94674	0.1295148	0.22025079	2.7155495	20	7 2.1	19.8
341172 2007 QW ₁₆	16.4	X	268.87719	117.02508	245.99514	3.70310	0.0804437	0.21508281	2.7588764	20	6 17.5	20.2
341173 2007 RX	15.9	X	101.35250	98.76292	298.84704	5.14587	0.0560110	0.18698069	3.0288066	20	1 21.8	20.2
341174 2007 RD ₈	15.8	X	161.11433	71.28916	256.86961	13.02343	0.2092083	0.18398535	3.0615914	20	1 16.8	21.0
341175 2007 RP ₈	16.1	X	89.92425	288.73461	189.80265	9.47308	0.0351663	0.20201311	2.8766234	20	4 13.2	19.9
341176 2007 RO ₁₀	15.8	X	222.24230	103.74806	318.92625	12.12853	0.1868604	0.21442566	2.7645103	20	6 30.4	20.3
341177 2007 RQ ₁₀	15.9	X	259.18586	166.37701	173.22565	25.54944	0.1631517	0.21009429	2.8023769	20	4 28.5	20.4
341178 2007 RG ₁₂	16.7	X	226.87622	133.77411	265.14486	3.33486	0.0715124	0.21336235	2.7736875	20	6 13.7	20.6
341179 2007 RT ₁₄	17.5	X	128.32652	236.02976	344.13349	20.08735	0.0504392	0.38816054	1.8612089	20	11 2.8	20.1
341180 2007 RY ₁₆	16.6	X	240.87327	92.09174	309.48329	5.17947	0.0721418	0.21665198	2.7455389	20	7 4.7	20.4
341181 2007 RW ₁₈	15.5	X	154.40283	87.72064	320.04115	7.28643	0.0362779	0.20005086	2.8954035	20	3 30.1	19.8
341182 2007 RW ₂₀	16.6	X	216.97918	356.04089	13.98988	1.76634	0.2126385	0.20591069	2.8402078	20	4 18.7	21.5
341183 2007 RU ₂₁	16.2	X	155.89765	24.43113	324.34958	3.99123	0.1631245	0.19038647	2.9925769	20	2 4.1	20.9
341184 2007 RJ ₂₈	16.4	X	322.49480	317.28682	2.29671	12.03385	0.1091937	0.21991920	2.7182785	20	7 6.7	19.8
341185 2007 RX ₃₂	16.0	X	269.04508	321.42537	23.41722	9.22783	0.2994878	0.21256917	2.7805830	20	4 24.7	20.4
341186 2007 RC ₄₃	15.9	X	75.94124	304.48551	204.65084	10.00667	0.0462803	0.20300190	2.8672747	20	5 6.3	19.7
341187 2007 RZ ₄₇	17.4	X	228.67011	262.10077	131.70504	0.48865	0.0785531	0.20891658	2.8128988	20	6 8.4	21.6
341188 2007 RJ ₅₀	16.9	X	163.14406	80.40701	315.43254	7.70936	0.1217061	0.19618702	2.9332959	20	3 30.3	21.7
341189 2007 RK ₅₁	15.6	X	233.31086	309.32778	330.80861	10.07171	0.0245518	0.18789025	3.0190239	20	1 31.4	20.0
341190 2007 RL ₅₂	16.6	X	183.09599	163.52522	243.00219	4.72557	0.2553056	0.20017559	2.8942007	20	5 5.2	21.7
341191 2007 RO ₅₂	15.7	X	325.73065	191.26796	333.60012	9.22644	0.0485185	0.18136424	3.0910186	20	—	—
341192 2007 RB ₅₃	16.2	X	321.80845	32.58139	247.07794	4.88902	0.0074108	0.20605487	2.8388827	20	5 19.1	20.1
341193 2007 RG ₆₀	16.2	X	303.59707	37.34077	292.10919	6.38794	0.0896011	0.21682523	2.7440762	20	6 1	

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341201 2007 RV ₈₀	16.2	X	225.09369	230.75909	170.60684	8.88565	0.1629275	0.21212565	2.7844575	20	6 7.7	20.8
341202 2007 RP ₈₃	16.2	X	248.35247	234.94261	170.16148	11.70514	0.1800442	0.21677504	2.7444997	20	7 3.3	20.5
341203 2007 RC ₉₁	16.0	X	129.82091	16.81846	5.21527	7.93532	0.0820057	0.18667210	3.0321437	20	2 11.8	20.4
341204 2007 RX ₉₄	16.2	X	186.22265	255.66052	166.66987	6.57138	0.0537344	0.20519295	2.8468271	20	5 29.9	20.5
341205 2007 RO ₁₀₁	16.4	X	234.71607	252.14073	137.52396	4.28870	0.1039163	0.21335855	2.7737205	20	6 7.9	20.6
341206 2007 RD ₁₀₉	16.2	X	247.41900	57.67689	354.69828	5.84409	0.0587191	0.21773701	2.7364103	20	7 30.8	19.9
341207 2007 RX ₁₁₀	16.6	X	241.57873	53.79230	353.90060	5.79071	0.0373908	0.21565328	2.7540089	20	7 19.5	20.5
341208 2007 RV ₁₁₁	17.2	X	164.74414	237.99714	113.30826	0.78032	0.3037174	0.19019028	2.9946346	20	2 21.5	22.4
341209 2007 RF ₁₁₆	17.0	X	285.09084	121.07895	231.00480	3.73014	0.0861307	0.21411167	2.7672124	20	6 23.9	20.6
341210 2007 RQ ₁₁₇	16.9	X	207.53427	100.06501	333.50849	3.36867	0.0816365	0.21271559	2.7793069	20	7 6.0	21.0
341211 2007 RW ₁₁₈	16.6	X	197.60137	240.66934	45.35386	3.80149	0.1082923	0.18223898	3.0811194	20	—	—
341212 2007 RY ₁₂₂	16.2	X	247.58701	2.58349	351.77882	14.17463	0.1817404	0.21013227	2.8020392	20	4 23.5	20.8
341213 2007 RQ ₁₂₄	16.3	X	223.91837	20.81739	2.42586	6.46032	0.1281132	0.21002605	2.8029839	20	5 14.3	20.7
341214 2007 RT ₁₂₆	16.7	X	112.15151	215.36236	185.02052	1.61471	0.0977672	0.18542146	3.0457626	20	2 12.7	20.9
341215 2007 RM ₁₂₇	15.9	X	321.70568	221.55069	12.88751	8.65760	0.1805352	0.19873580	2.9081624	20	3 1.6	19.6
341216 2007 RB ₁₂₈	16.8	X	184.24719	337.31861	38.51611	2.58247	0.0851302	0.19624142	2.9327537	20	3 30.3	21.3
341217 2007 RX ₁₂₈	16.2	X	187.65230	319.25781	15.92341	9.9516	0.0913574	0.18955453	3.0013267	20	2 18.0	20.9
341218 2007 RG ₁₂₉	16.6	X	13.36077	192.98402	51.47165	2.49746	0.1735896	0.21202947	2.7852995	20	6 21.1	19.2
341219 2007 RV ₁₃₀	16.4	X	282.53727	49.82784	187.32918	8.33775	0.0505483	0.18682932	3.0304424	20	1 30.4	20.9
341220 2007 RF ₁₃₃	16.4	X	268.88456	122.56733	163.52783	11.97981	0.1378336	0.20199017	2.8768412	20	3 3.5	20.5
341221 2007 RB ₁₃₅	17.2	X	242.69899	87.58266	253.69026	1.00994	0.0810499	0.20608389	2.8386163	20	4 17.5	21.4
341222 2007 RT ₁₃₈	15.6	X	104.23383	226.19092	187.37967	10.27849	0.0299227	0.18930128	3.0040029	20	2 7.3	20.0
341223 2007 RF ₁₄₂	17.2	X	9.55640	309.95207	8.14600	20.70713	0.0987591	0.38112827	1.8840335	20	10 21.6	18.8
341224 2007 RH ₁₄₂	15.7	X	197.38837	144.52720	196.51230	16.01183	0.2005845	0.19269922	2.9685844	20	2 27.3	21.0
341225 2007 RB ₁₄₃	16.6	X	303.82782	77.71201	259.05254	3.33169	0.1265078	0.21915472	2.7245963	20	6 25.0	19.8
341226 2007 RW ₁₄₃	16.0	X	216.61066	118.61763	319.87947	8.56550	0.1857901	0.21468921	2.7622474	20	7 14.8	20.4
341227 2007 RM ₁₄₆	15.4	X	98.57070	211.08197	175.68701	18.27609	0.2181025	0.18008583	3.1056298	20	1 26.7	20.0
341228 2007 RK ₁₅₀	16.0	X	168.34715	3.61358	21.96471	15.59800	0.1581293	0.19619038	2.9332623	20	3 30.6	20.8
341229 2007 RJ ₁₅₃	16.7	X	253.04435	25.14881	258.58811	2.24476	0.1382101	0.19886035	2.9069479	20	2 12.9	21.1
341230 2007 RO ₁₅₃	16.9	X	254.23016	155.44304	280.71646	2.65384	0.0684733	0.22707751	2.6608474	20	9 6.3	20.5
341231 2007 RG ₁₅₆	17.0	X	261.13195	22.07119	328.66645	3.03283	0.116051	0.21194533	2.7860366	20	5 16.7	21.0
341232 2007 RY ₁₅₈	17.1	X	315.07683	275.97684	25.11700	5.01196	0.0648773	0.21334203	2.7738636	20	5 31.3	20.6
341233 2007 RJ ₁₆₂	16.6	X	308.48040	353.68852	334.99200	6.02602	0.1346864	0.21658607	2.7460959	20	6 20.0	19.9
341234 2007 RD ₁₆₉	16.6	X	303.32587	212.60663	92.13326	2.88288	0.1803759	0.21324674	2.7746899	20	5 3.0	19.9
341235 2007 RP ₁₆₉	16.4	X	179.86274	330.29239	61.07466	3.31803	0.1218101	0.20035722	2.8924512	20	4 14.5	20.9
341236 2007 RM ₁₇₁	16.9	X	204.93675	39.50080	23.56361	5.86476	0.0370810	0.21340127	2.7733502	20	6 21.8	20.8
341237 2007 RO ₁₇₁	16.6	X	245.09934	219.18298	147.52684	7.00847	0.0403296	0.21068373	2.7971476	20	5 29.9	20.6
341238 2007 RQ ₁₇₄	16.1	X	189.94527	197.90035	167.71561	11.85643	0.0850493	0.19555757	2.9395869	20	3 24.3	20.5
341239 2007 RW ₁₇₄	16.5	X	172.38953	194.75436	149.20548	6.51348	0.2501075	0.18986712	2.9980316	20	2 16.2	21.7
341240 2007 RB ₁₇₆	15.7	X	136.79672	184.17766	207.08823	12.83006	0.2979057	0.18420126	3.0591985	20	3 15.5	21.0
341241 2007 RD ₁₇₆	16.8	X	24.32521	249.72396	3.81873	3.58055	0.0478379	0.21405268	2.7677208	20	7 13.0	20.3
341242 2007 RH ₁₇₈	16.4	X	288.95806	219.09106	30.65877	11.44730	0.1752290	0.19619179	2.9332484	20	2 11.4	20.9
341243 2007 RJ ₁₇₉	15.6	X	122.11288	10.06585	48.15867	8.11745	0.2192016	0.18449561	3.0559437	20	4 2.3	20.4
341244 2007 RD ₁₈₉	16.5	X	261.03815	64.03460	296.45297	11.85611	0.1575337	0.21230469	2.8728918	20	5 22.3	20.7
341245 2007 RG ₁₉₁	17.0	X	193.44406	349.75679	337.95603	1.03433	0.1645628	0.19168326	2.9790646	20	2 11.9	21.7
341246 2007 RP ₂₀₂	16.2	X	113.05619	108.98129	4.41855	9.61407	0.0873842	0.19960752	2.8996892	20	5 9.3	20.5
341247 2007 RP ₂₀₃	16.3	X	89.81576	261.88905	189.82537	8.35630	0.1343352	0.18916839	3.0054096	20	3 24.3	20.3
341248 2007 RQ ₂₀₃	17.0	X	240.36218	205.55960	180.91113	1.14606	0.2052373	0.20963427	2.8064751	20	5 30.3	21.5
341249 2007 RD ₂₀₅	16.2	X	147.39966	256.34898	206.61150	9.26010	0.0552041	0.20555452	2.8434878	20	6 5.5	20.4
341250 2007 RX ₂₀₆	16.6	X	272.79898	241.69656	68.65030	3.06984	0.0498782	0.20319788	2.8654308	20	4 19.8	20.6
341251 2007 RR ₂₀₈	16.3	X	246.68623	249.84524	67.28849	2.97428	0.0266744	0.19908422	2.9047683	20	3 30.8	20.4
341252 2007 RP ₂₁₂	15.9	X	295.63296	285.85165	3.19749	11.26218	0.0782916	0.20598385	2.8395352	20	4 13.7	19.7
341253 2007 RS ₂₁₄	17.0	X	255.84193	50.34934	321.02217	3.55852	0.0872280	0.21134414	2.7913176	20	6 10.4	20.8
341254 2007 RK ₂₁₅	16.7	X	85.66244	247.14701	307.04288	3.08671	0.0377970	0.21470966	2.7620720	20	7 16.7	20.4
341255 2007 RM ₂₁₆	16.8	X	288.83930	32.41320	312.93669	2.57897	0.1095810	0.21442642	2.7645038	20	6 16.5	20.4
341256 2007 RB ₂₂₈	16.1	X	20.30019	0.46236	220.36762	11.51389	0.0173860	0.19675437	2.9276543	20	5 21.2	20.0
341257 2007 RD ₂₃₀	17.8	X	267.93880	312.33372	176.73630	25.24247	0.1007599	0.39370315	1.8436994	20	—	—
341258 2007 RM ₂₃₃	15.9	X	190.65654	238.84872	156.93675	13.12781	0.1426707	0.20193129	2.8774004	20	5 2.9	20.7
341259 2007 RR ₂₃₃	15.9	X	217.52699	215.54904	165.12189	11.21520	0.1483708	0.20514603	2.8472612	20	5 8.4	20.6
341260 2007 RA ₂₃₄	15.6	X	86.63891	98.53530	348.34992	15.82511	0.2091935	0.18444822	3.0564672	20	3 22.8	19.8
341261 2007 RS ₂₃₅	16.4	X	322.68933	334.05277	342.00965	3.45805	0.0743650	0.21737688	2.7394317	20	7 3.5	19.7
341262 2007 RJ ₂₄₆	16.7	X	293.18875	327.71895	350.69338	8.93921	0.0794830	0.21386611	2.7693302	20	5 18.8	20.6
341263 2007 RR ₂₄₉	16.4	X	175.41403	225.19379	110.14093	2.76409	0.1271141	0.18922662	3.0047930	20	2 4.4	21.1
341264 2007 RF ₂₅₀	15.7	X	323.29089	208.76586	338.45720	14.24575	0.0607505	0.18669692	3.0318750	20	1 24.1	19.9
341265 2007 RJ ₂₅₁	16.8	X	183.86017	212.09397	245.19042	4.63218	0.0359645	0.21359998	2.7716299	20	7 10.5	20.7
341266 2007 RL ₂₅₄	16.5	X	24.27310	73.06711	178.41866	6.69591	0.0359256	0.21824161	2.7321907	20	7 7.6	20.2
341267 2007 RR ₂₅₄	16.5	X	208.07901	160.57783	194.42828	9.04796	0.0246532	0.20187970	2.8778906	20	3 30.1	20.6
341268 2007 RJ ₂₅₈	17.0	X	217.88749	34.23444	55.55221	3.77523	0.0422174	0.22173030	2.7034563	20	8 14.5	20.7
341269 2007 RC ₂₆₁	16.8	X	128.63394	35.48057	97.50672	4.08056	0.0290341	0.20854344	2.8162532	20	6 19.1	20.8
341270 2007 RE ₂₆₄	15.7	X	52.94120	127.34486	340.35273	8.79641	0.0812038	0.18990670	2.9976151	20	2 16.8	19.5
341271 2007 RL ₂₇₁	15.3	X	15.05074	150.45163	58.12275	15.18150	0.1078373	0.18911411	3.0059846	20	5 2.9	18.9
341272 2007 RS ₂₇₁	16.0	X	180.39054	280.62141	60.75335	5.79695	0.2090852	0.18302903	3.0722465	20	2 21.0	21.3
341273 2007 RJ ₂₈₀	15.9	X	279.50429	95.43982	25							

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341281 2007 RC ₂₈₅	16.3	X	257.88519	209.19190	48.12986	2.81229	0.1427599	0.18752464	3.0229466	20	1 20.2	21.1
341282 2007 RX ₂₈₅	16.1	X	24.71148	242.96971	234.83443	4.06803	0.1582616	0.17179901	3.2047115	20	1 20.9	19.9
341283 2007 RA ₂₉₀	15.9	X	122.41219	5.53966	51.14402	11.88852	0.0277324	0.18281950	3.0745935	20	3 13.2	20.4
341284 2007 RA ₂₉₁	16.1	X	150.58963	172.71105	217.06151	12.61275	0.1345612	0.18544829	3.0454689	20	3 12.6	21.0
341285 2007 RY ₂₉₂	16.3	X	87.71008	245.00875	159.89090	1.68457	0.0792590	0.17895308	3.1187215	20	1 17.8	20.5
341286 2007 RN ₂₉₃	16.2	X	103.16158	255.29310	174.63704	6.58235	0.0531635	0.18991162	2.9975633	20	3 1.9	20.5
341287 2007 RS ₂₉₃	16.3	X	85.88294	132.94018	40.61559	4.54378	0.0381058	0.20912048	2.8110701	20	6 18.6	20.2
341288 2007 RA ₂₉₄	16.3	X	117.25833	152.14308	209.92857	3.82345	0.0402170	0.17924132	3.1153771	20	—	—
341289 2007 RC ₂₉₄	16.6	X	20.98578	329.54182	215.91401	1.75987	0.0221978	0.19774706	2.9178481	20	4 5.2	20.5
341290 2007 RE ₂₉₄	16.7	X	118.25658	219.09923	197.50109	4.69407	0.1880781	0.18795403	3.0183409	20	3 20.6	21.4
341291 2007 RD ₂₉₆	16.2	X	117.68729	35.79573	19.95287	10.02718	0.0638141	0.18878124	3.0095171	20	3 7.8	20.5
341292 2007 RW ₂₉₈	16.7	X	121.95715	291.31991	170.02162	7.68443	0.1767083	0.19593323	2.9358283	20	5 18.8	21.4
341293 2007 RJ ₃₀₂	16.4	X	216.04965	262.14698	73.66518	4.08347	0.0995015	0.19022913	2.9942269	20	3 15.8	21.0
341294 2007 RK ₃₀₈	16.7	X	221.36583	160.89353	194.94390	1.56462	0.1085373	0.20154225	2.8811021	20	4 11.2	20.9
341295 2007 RE ₃₁₁	16.2	X	273.14721	347.35691	14.42958	9.77656	0.1672498	0.21600761	2.7509963	20	6 6.6	20.2
341296 2007 RQ ₃₁₆	16.5	X	154.22049	192.06257	186.36651	9.11503	0.0729557	0.19042087	2.9922166	20	2 28.5	21.1
341297 2007 RB ₃₁₇	16.4	X	202.51789	260.50971	74.08982	2.14142	0.0358495	0.19282435	2.9673001	20	2 29.4	20.8
341298 2007 RP ₃₁₇	16.6	X	129.40785	296.15607	164.97863	2.17867	0.0191690	0.20303621	2.8669517	20	5 8.8	20.6
341299 2007 RQ ₃₁₇	16.2	X	152.50650	173.27822	213.47163	16.33971	0.0742213	0.18583685	3.0412222	20	3 5.4	21.0
341300 2007 RK ₃₁₇	16.5	X	263.29889	134.07686	220.10618	12.32382	0.1802311	0.21186220	2.7867653	20	5 16.3	20.6
341301 2007 RJ ₃₂₀	16.3	X	98.36766	53.90120	322.34897	4.71868	0.1685911	0.17933072	3.1143416	20	1 10.0	20.6
341302 2007 RA ₃₂₂	16.8	X	157.65340	211.79630	187.26321	1.72013	0.0755317	0.19864636	2.9090352	20	3 29.4	21.2
341303 2007 RF ₃₂₃	16.5	X	185.63482	327.38833	42.36528	2.51389	0.1324479	0.19711631	2.9240694	20	3 25.1	21.1
341304 2007 RF ₃₂₄	16.4	X	209.58773	308.26446	72.14261	3.14758	0.0832185	0.20298692	2.8674158	20	5 1.3	20.6
341305 2007 RL ₃₂₄	15.9	X	289.17746	184.33853	46.64843	10.25902	0.0309030	0.17837319	3.1254772	20	2 9.8	20.5
341306 2007 RQ ₃₂₄	16.2	X	209.12991	114.49367	216.95151	8.67256	0.0562873	0.18606903	3.0386918	20	2 29.0	20.9
341307 2007 RZ ₃₂₄	16.9	X	209.34548	148.61969	234.25620	1.23004	0.0869818	0.20235803	2.8733537	20	5 3.1	21.1
341308 2007 SN ₁	17.0	X	274.65445	1.48197	42.76029	22.19221	0.1903842	0.37348805	1.9096403	20	9 26.5	19.0
341309 2007 SW ₃	16.0	X	140.99275	161.44688	195.95792	21.06894	0.2799896	0.18347088	3.0673120	20	2 6.3	21.5
341310 2007 ST ₇	15.8	X	258.10988	151.40991	142.05324	2.87863	0.0823763	0.19588355	2.9363246	20	3 8.1	20.1
341311 2007 SL ₁₅	17.6	X	355.74462	313.99056	10.21439	20.31386	0.0515211	0.37595843	1.9012658	20	10 4.5	18.9
341312 2007 ST ₁₉	16.9	X	97.82449	138.83955	317.80903	2.24813	0.0850304	0.19229093	2.9727851	20	4 1.5	20.9
341313 2007 SW ₁₉	15.5	X	75.44183	309.88940	168.44705	14.09560	0.2408086	0.18496435	3.0507786	20	4 28.2	19.7
341314 2007 SC ₂₀	15.9	X	155.42615	330.55986	356.57514	15.03262	0.2303495	0.18175819	3.0865505	20	1 19.4	21.3
341315 2007 SB ₂₁	15.8	X	137.46154	324.43818	73.82939	11.16101	0.1110179	0.18699853	3.0286140	20	3 16.9	20.5
341316 2007 SR ₂₁	16.1	X	253.34419	238.62779	138.22244	7.21273	0.0872058	0.21341317	2.7732471	20	6 15.4	20.1
341317 2007 TE	16.3	X	239.18183	178.74398	202.31978	8.67356	0.1679042	0.21226839	2.7832091	20	5 26.5	20.7
341318 2007 TQ ₁	16.7	X	276.08902	191.42657	165.45999	7.05009	0.0957968	0.21536677	2.7564508	20	6 16.9	20.5
341319 2007 TL ₄	16.6	X	204.19475	242.34875	118.34477	2.94605	0.0718411	0.19583712	2.9367888	20	4 2.5	20.9
341320 2007 TP ₄	16.5	X	172.66351	357.80008	83.87014	3.67478	0.1947853	0.20174294	2.8791911	20	6 8.5	21.4
341321 2007 TK ₁₄	16.8	X	301.19297	46.20727	280.81011	4.51851	0.1727496	0.21598104	2.7512219	20	5 30.3	20.3
341322 2007 TM ₁₄	16.3	X	309.93285	199.23468	82.81731	3.13603	0.0265983	0.20469775	2.8514166	20	5 5.1	20.0
341323 2007 TO ₁₆	18.3	X	301.69406	266.65645	198.66363	19.25419	0.0779539	0.39445294	1.8413623	20	—	—
341324 2007 TA ₁₇	15.9	X	205.46981	257.69802	23.62796	8.86577	0.0581151	0.17907709	3.1172816	20	1 1.8	20.8
341325 2007 TN ₂₀	16.3	X	203.22135	91.31408	252.51137	3.13690	0.1379626	0.19520644	2.9431109	20	3 8.2	21.1
341326 2007 TD ₂₃	16.3	X	141.47385	48.65178	351.05652	6.14345	0.1689400	0.19107495	2.9853840	20	3 20.9	21.1
341327 2007 TF ₂₆	16.8	X	157.31000	80.29845	343.66823	1.42731	0.0533976	0.20288840	2.8683440	20	4 26.9	21.0
341328 2007 TD ₂₈	16.2	X	174.13867	168.84399	205.56764	8.28104	0.1429881	0.19171508	2.9787349	20	3 18.3	21.1
341329 2007 TZ ₃₀	15.5	X	154.30537	308.32243	28.96038	15.01706	0.2560659	0.18193036	3.0846029	20	2 1.8	21.0
341330 2007 TK ₃₃	16.4	X	192.87185	332.54486	45.33692	2.63815	0.1463610	0.19551389	2.9400247	20	4 10.3	21.2
341331 2007 TA ₃₄	15.9	X	60.58915	281.17280	211.51404	10.80648	0.1425800	0.18648964	3.0341211	20	4 5.7	19.7
341332 2007 TD ₃₄	15.9	X	140.89353	4.95327	38.07091	10.02265	0.0465717	0.18810712	3.0167030	20	3 17.9	20.3
341333 2007 TV ₃₄	15.6	X	147.51975	337.34188	39.66551	12.11875	0.1151426	0.18496006	3.0508258	20	3 2.4	20.5
341334 2007 TW ₃₅	15.9	X	179.07714	298.97304	55.69548	6.42457	0.2459941	0.18948540	3.0020566	20	3 7.1	21.2
341335 2007 TZ ₃₅	16.5	X	200.15739	29.13555	6.93064	8.69293	0.2704413	0.20438514	2.8543234	20	5 2.9	21.6
341336 2007 TU ₃₆	17.1	X	182.11563	57.12788	11.82633	2.38258	0.0367084	0.20680020	2.8320576	20	6 1.1	21.0
341337 2007 TY ₃₇	15.9	X	202.21077	293.80743	15.71731	9.39374	0.0566258	0.18716072	3.0268641	20	2 1.9	20.5
341338 2007 TC ₃₉	16.0	X	210.18554	250.16283	43.48766	10.59060	0.0826533	0.18072305	3.0983253	20	1 22.4	20.9
341339 2007 TW ₄₀	15.7	X	356.47054	283.58033	215.75216	15.59272	0.0583095	0.17496472	3.1659379	20	1 5.6	20.2
341340 2007 TZ ₄₀	15.7	X	117.29085	15.60555	44.96250	9.87593	0.1375655	0.18492790	3.0511795	20	3 23.6	20.3
341341 2007 TG ₄₃	16.1	X	233.29793	46.96073	43.76792	9.18050	0.2075433	0.21401574	2.7680392	20	8 16.6	20.5
341342 2007 TQ ₄₄	15.9	X	64.58055	47.10060	25.22119	9.19491	0.0881073	0.17939236	3.1136283	20	1 24.4	20.1
341343 2007 TD ₄₅	16.4	X	123.80480	275.35463	192.47376	4.14958	0.1278229	0.19776426	2.9176790	20	5 22.9	20.7
341344 2007 TM ₄₆	16.6	X	236.42881	140.20519	143.38444	0.32318	0.0413714	0.18863916	3.0110281	20	2 5.2	20.9
341345 2007 TF ₄₇	16.1	X	71.54574	182.63683	279.49468	2.13624	0.1558979	0.18444910	3.0564575	20	3 15.7	20.0
341346 2007 TN ₄₇	16.0	X	84.51797	207.20556	224.96943	8.17212	0.0732506	0.18310539	3.0713923	20	2 11.4	20.3
341347 2007 TW ₄₉	15.7	X	172.29316	122.06860	214.64775	11.32574	0.1162758	0.18425683	3.0585834	20	1 30.3	20.7
341348 2007 TC ₅₁	16.5	X	209.24536	50.29130	287.45790	0.76849	0.0599919	0.19165291	2.9793791	20	3 9.9	21.0
341349 2007 TR ₅₁	15.8	X	4.70094	268.09204	217.06195	8.96701	0.0810457	0.17540365	3.1606541	20	—	—
341350 2007 TK ₅₃	16.8	X	233.65006	192.38339	183.13547	1.83260	0.0807526	0.20396966	2.8581982	20	5 21.6	20.8
341351 2007 TZ ₅₃	16.2	X	65.87839	61.11829	52.59468	1.68415	0.1286791	0.18467394	3.0539761	20	3 20.2	20.1
341352 2007 TT ₅₈	16.4	X	159.05576	120.66448	342.12487	11.47548	0.2672443	0.20568986	2.8422403	20	6 25.4	21.6
341353 2007 TJ ₅₉	16.8	X	243.01533	218.71084	159.87613	3.92225	0.1089611	0.21216582	2.7841060			

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341361 2007 TP ₇₃	16.6	X	268.65666	174.97369	186.74951	3.74951	0.1121426	0.21242750	2.7818191	20	6 10.9	20.4
341362 2007 TD ₇₈	15.7	X	132.10959	206.50296	225.76962	9.95922	0.1106481	0.19141558	2.9818414	20	4 13.8	20.2
341363 2007 TU ₈₄	15.7	X	144.75734	198.36471	187.99051	6.99940	0.2664556	0.18608253	3.0385448	20	3 15.5	20.8
341364 2007 TE ₈₆	16.8	X	188.02743	210.79510	140.79074	2.88485	0.0871284	0.18884021	3.0088907	20	3 5.4	21.3
341365 2007 TB ₈₇	16.7	X	243.25803	225.68096	104.88557	3.17462	0.0981689	0.19678824	2.9273183	20	4 5.6	21.0
341366 2007 TJ ₉₃	16.1	X	8.46263	305.04906	198.73642	7.19167	0.0504710	0.17957905	3.1114699	20	1 27.6	20.4
341367 2007 TQ ₉₃	15.8	X	121.54785	155.25643	210.28945	22.12466	0.1190990	0.17706795	3.1408177	20	1 12.6	20.8
341368 2007 TT ₉₄	15.2	X	74.39318	37.64072	39.79729	15.92173	0.1920630	0.17996875	3.1069766	20	3 4.4	19.5
341369 2007 TU ₉₅	15.8	X	96.86048	56.71066	39.30746	10.18544	0.0553373	0.18655014	3.0334650	20	3 31.1	20.1
341370 2007 TC ₁₀₁	16.7	X	121.08967	341.09639	97.46254	2.29302	0.1484257	0.19200586	2.9757269	20	4 16.2	21.1
341371 2007 TD ₁₀₁	15.8	X	180.65765	131.63541	186.63405	9.61974	0.0463780	0.18272010	3.0757084	20	1 15.7	20.5
341372 2007 TA ₁₀₇	17.2	X	136.27295	214.17443	215.44074	2.75712	0.1691613	0.19319507	2.9635029	20	4 21.3	21.7
341373 2007 TR ₁₀₇	16.6	X	124.23925	134.49415	274.19120	1.06935	0.0902054	0.18965425	3.0002745	20	3 6.0	20.9
341374 2007 TB ₁₀₈	17.0	X	310.47902	328.09114	356.57668	2.53379	0.0678118	0.21366200	2.7710936	20	6 26.7	20.5
341375 2007 TW ₁₀₈	15.7	X	83.11294	211.02562	220.00635	7.95758	0.1008867	0.18391191	3.0624064	20	2 11.9	19.9
341376 2007 TD ₁₁₃	16.0	X	182.97163	105.48112	282.33283	10.75541	0.0730405	0.19720682	2.9231747	20	4 6.4	20.7
341377 2007 TQ ₁₁₅	16.4	X	56.62259	324.45394	140.86186	2.48645	0.1724849	0.17986101	3.1082173	20	2 18.7	20.5
341378 2007 TH ₁₁₉	15.6	X	91.54414	162.76642	269.93579	8.41527	0.0898319	0.18086471	3.0967073	20	2 22.9	20.0
341379 2007 TW ₁₂₀	16.4	X	194.70629	322.50865	40.48882	1.67804	0.0698266	0.19162923	2.9796245	20	3 25.6	20.8
341380 2007 TZ ₁₂₀	16.4	X	191.54093	87.73900	309.94545	4.08534	0.1130466	0.20427597	2.8553402	20	4 30.8	21.0
341381 2007 TJ ₁₂₁	16.0	X	288.81066	237.49138	13.57011	12.19917	0.0605339	0.18907343	3.0064158	20	2 28.6	20.3
341382 2007 TA ₁₂₃	15.9	X	69.25506	323.10450	127.30701	2.39562	0.1415050	0.18086271	3.0967301	20	2 26.7	19.8
341383 2007 TL ₁₂₃	16.3	X	184.63105	187.45099	141.19785	2.53306	0.0634531	0.18349129	3.0670846	20	2 3.2	20.8
341384 2007 TB ₁₂₄	16.2	X	133.22159	191.99697	156.04074	2.99741	0.0558767	0.17678239	3.1441992	20	1 1.8	20.8
341385 2007 TH ₁₂₆	16.4	X	128.88871	249.42100	197.37211	2.58344	0.0833990	0.19342671	2.9611365	20	4 27.1	20.7
341386 2007 TS ₁₂₆	15.5	X	138.14243	331.24800	38.65767	16.40564	0.1761092	0.18231958	3.0802113	20	2 21.8	20.6
341387 2007 TA ₁₂₇	15.7	X	47.59982	79.33893	44.05050	11.42578	0.0825779	0.18343555	3.0677058	20	3 5.8	19.8
341388 2007 TO ₁₂₈	16.8	X	90.74110	128.43224	298.16886	0.68554	0.1969619	0.17979146	3.1090187	20	3 4.5	21.0
341389 2007 TP ₁₂₉	16.3	X	157.62586	334.94005	37.56452	1.84376	0.2001983	0.18641650	3.0349147	20	3 7.1	21.3
341390 2007 TY ₁₃₀	15.6	X	128.86537	16.30683	21.15822	9.27623	0.1268647	0.18375010	3.0642039	20	3 6.2	20.2
341391 2007 TV ₁₃₁	16.6	X	55.63483	75.49731	51.05729	2.03239	0.1383844	0.18414370	3.0598359	20	3 22.8	20.2
341392 2007 TA ₁₃₄	16.0	X	148.40014	307.61567	45.29020	5.81807	0.1391506	0.18068518	3.0987582	20	2 2.8	20.8
341393 2007 TN ₁₃₇	15.3	X	131.96461	6.46325	11.96755	12.62963	0.1449000	0.18171607	3.0870275	20	2 19.6	20.1
341394 2007 TO ₁₃₈	16.6	X	254.88989	116.79675	299.31410	13.80445	0.3169805	0.21554958	2.7548921	20	7 9.7	21.1
341395 2007 TB ₁₄₀	15.2	X	72.28763	188.17277	245.98089	16.84429	0.2033465	0.17691644	3.1426107	20	2 11.9	19.5
341396 2007 TY ₁₄₀	15.5	X	262.06724	241.13215	53.61919	9.86408	0.1106335	0.19471715	2.9480391	20	3 15.5	20.0
341397 2007 TB ₁₄₄	16.6	X	249.54445	178.64108	188.97051	4.18850	0.0887455	0.21009878	2.8023370	20	5 29.4	20.7
341398 2007 TC ₁₅₁	16.1	X	151.27330	22.68487	341.20547	6.31138	0.1722157	0.18746357	3.0236031	20	2 18.7	21.0
341399 2007 TP ₁₅₂	15.7	X	111.04023	184.84958	218.46821	11.59920	0.1188514	0.18486278	3.0518960	20	2 14.0	20.3
341400 2007 TD ₁₅₈	15.7	X	125.49414	56.72035	11.32034	12.86624	0.0556244	0.19166888	2.9792136	20	3 27.9	19.9
341401 2007 TE ₁₅₈	15.7	X	218.07532	322.81020	9.52222	10.50303	0.0633508	0.19323657	2.9630786	20	3 14.8	20.0
341402 2007 TH ₁₆₁	15.5	X	184.94702	300.69936	14.78537	11.95340	0.0620827	0.18543368	3.0456288	20	1 22.4	20.3
341403 2007 TP ₁₆₁	16.2	X	180.65189	4.84022	9.13665	12.01687	0.0672713	0.19454476	2.9497804	20	3 24.1	20.5
341404 2007 TS ₁₆₂	16.0	X	173.53480	97.96256	201.57292	25.98709	0.2633892	0.18145177	3.0900244	20	—	—
341405 2007 TZ ₁₆₂	16.3	X	169.42881	27.75317	10.98016	1.72129	0.1113253	0.19519566	2.9432193	20	4 12.1	20.7
341406 2007 TT ₁₆₇	15.4	X	207.76196	57.04088	246.96655	7.17949	0.1154406	0.18698455	3.0287649	20	1 26.4	20.3
341407 2007 TU ₁₆₇	15.6	X	111.35709	75.61021	1.43689	10.10550	0.0990255	0.19004007	2.9962123	20	3 26.9	19.9
341408 2007 TZ ₁₆₈	15.9	X	204.78534	147.38659	228.17546	8.20642	0.0537948	0.19947004	2.9010214	20	4 19.6	20.3
341409 2007 TM ₁₇₀	15.8	X	170.00363	30.15231	17.35291	9.53700	0.1481273	0.19291064	2.9664151	20	4 23.2	20.6
341410 2007 TN ₁₇₃	16.6	X	225.42185	290.33093	38.91415	2.39678	0.0810100	0.19594428	2.9357179	20	3 16.7	21.0
341411 2007 TV ₁₇₃	16.2	X	111.60681	32.27727	23.33730	6.44094	0.1135946	0.18564067	3.0433645	20	3 6.3	20.5
341412 2007 TQ ₁₈₂	15.2	X	95.23776	336.79382	64.02869	19.07692	0.2105692	0.17828875	3.1264639	20	2 17.9	19.9
341413 2007 TR ₁₈₄	15.9	X	45.64010	285.47255	187.93482	10.84490	0.0493361	0.18499549	3.0504363	20	2 8.2	20.1
341414 2007 TC ₁₈₆	16.0	X	213.40610	324.49974	70.07844	5.81251	0.1095824	0.20448918	2.8533551	20	5 21.3	20.2
341415 2007 TR ₁₈₆	16.2	X	180.79366	246.77896	96.58401	6.09703	0.1995055	0.18946254	3.0022981	20	2 22.3	21.3
341416 2007 TU ₁₈₉	17.2	X	208.93933	101.08483	352.96638	5.76793	0.2796098	0.21474910	2.7617338	20	7 21.8	22.0
341417 2007 TC ₁₉₅	16.4	X	154.78838	322.45506	32.34737	3.91255	0.0241334	0.18184581	3.0855590	20	1 31.5	20.9
341418 2007 TZ ₁₉₈	16.5	X	128.25317	82.78529	277.85391	1.58323	0.0898300	0.17896818	3.1185461	20	1 14.9	20.9
341419 2007 TS ₂₀₀	16.1	X	29.40201	297.54403	209.27703	10.01679	0.0697384	0.18638413	3.0352660	20	2 27.4	20.2
341420 2007 TH ₂₀₁	16.9	X	121.99651	77.29864	4.76271	0.99212	0.1801012	0.19013036	2.9952637	20	4 23.6	21.4
341421 2007 TW ₂₀₁	16.3	X	138.89769	212.59422	166.89963	2.84160	0.1139250	0.18299185	3.0726627	20	2 19.5	21.0
341422 2007 TL ₂₀₃	15.5	X	102.61898	348.25113	53.39527	10.58555	0.1007426	0.17808506	3.1288474	20	2 8.8	20.0
341423 2007 TZ ₂₀₃	16.1	X	137.75915	120.82164	214.19593	13.23781	0.1953728	0.17541852	3.1604755	20	1 5.1	21.2
341424 2007 TJ ₂₀₄	16.2	X	10.17498	291.52717	206.31485	12.87373	0.0297187	0.17829182	3.1264280	20	1 22.2	20.7
341425 2007 TP ₂₀₄	16.3	X	108.25626	299.99933	129.27280	3.06981	0.0726851	0.18493998	3.0510466	20	3 12.3	20.5
341426 2007 TV ₂₀₅	15.5	X	295.69770	196.09119	10.10064	16.20863	0.0247489	0.18207892	3.0829249	20	1 19.9	20.1
341427 2007 TB ₂₁₆	15.8	X	109.59005	12.39350	17.09491	5.57670	0.1438370	0.17823708	3.1270681	20	2 6.2	20.3
341428 2007 TB ₂₁₇	15.5	X	45.98266	90.44803	26.70961	9.78475	0.0644545	0.18026144	3.1036124	20	2 22.1	19.7
341429 2007 TB ₂₂₂	16.7	X	228.23516	346.36855	36.29737	6.54946	0.0479437	0.20492420	2.8493155	20	5 26.4	20.8
341430 2007 TX ₂₂₂	16.5	X	141.98491	291.78235	131.37665	3.26645	0.1688533	0.19241556	2.9715013	20	4 20.4	21.3
341431 2007 TC ₂₂₉	15.7	X	71.72750	49.85118	35.08516	11.46817	0.1206778	0.18000735	3.1065324	20	2 25.8	19.9
341432 2007 TA ₂₃₀	15.8	X	193.29073	93.95370	238.24212	9.16750	0.1202359	0.18809478	3.0168349	20	2 12.9	20.7
341433 2007 TW ₂₃₀	16.7	X	181.93037	169.34687	135.1110							

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341441 2007 TA ₂₄₅	16.0	X	167.05627	70.78253	295.18868	9.69734	0.1034623	0.18953766	3.0015048	20	2 26.9	20.8
341442 2007 TK ₂₄₅	15.6	X	112.20607	128.97718	278.13681	10.25007	0.1025643	0.18325242	3.0697493	20	2 17.9	20.2
341443 2007 TY ₂₄₆	15.2	X	87.70401	123.04808	292.20122	12.18109	0.0906085	0.17744377	3.1363815	20	1 30.5	19.6
341444 2007 TP ₂₅₀	15.8	X	298.38261	47.64417	209.32618	17.38941	0.1950105	0.19838411	2.9115983	20	2 17.8	20.3
341445 2007 TQ ₂₅₄	16.2	X	130.08052	269.60703	124.05054	3.57483	0.1331071	0.18413955	3.0598819	20	3 1.3	20.9
341446 2007 TC ₂₅₆	15.9	X	354.47858	161.67990	37.76105	11.05228	0.0525099	0.19097116	2.9864657	20	3 22.6	19.9
341447 2007 TN ₂₆₁	16.7	X	106.80767	169.90723	259.36611	1.40715	0.0624189	0.18485410	3.0519915	20	3 7.4	21.0
341448 2007 TG ₂₆₅	16.2	X	98.78030	174.17625	332.21520	5.33978	0.0232761	0.20376992	2.8600656	20	5 27.2	20.2
341449 2007 TK ₂₆₈	15.9	X	47.41825	82.80217	30.54086	9.85405	0.0675941	0.18380983	3.0635401	20	2 19.2	20.0
341450 2007 TP ₂₆₉	16.3	X	200.09230	257.99432	82.01509	2.20863	0.1756790	0.19249003	2.9707349	20	3 3.5	21.1
341451 2007 TB ₂₇₁	16.9	X	156.82531	59.65852	336.00199	2.20511	0.1149053	0.19106169	2.9855222	20	3 26.9	21.5
341452 2007 TM ₂₇₁	15.9	X	176.64170	303.04113	22.75420	9.55210	0.0994398	0.18220996	3.0814466	20	1 27.7	20.8
341453 2007 TN ₂₇₁	16.8	X	177.92542	113.69138	316.87260	1.14100	0.0455714	0.20217627	2.8750755	20	5 29.4	21.0
341454 2007 TP ₂₈₇	15.2	X	140.55938	287.33074	61.47935	11.82829	0.1139906	0.18247112	3.0785057	20	1 18.2	20.0
341455 2007 TF ₂₉₉	16.6	X	234.76449	100.93911	241.61076	1.72226	0.1675637	0.20020528	2.8939146	20	4 3.5	21.2
341456 2007 TV ₃₀₀	16.3	X	142.64982	104.59955	286.99854	1.32823	0.1932420	0.18672274	3.0315955	20	3 14.6	21.1
341457 2007 TY ₃₀₃	16.0	X	256.51714	37.71457	182.54457	10.19902	0.0524295	0.17266227	3.1940209	20	—	—
341458 2007 TC ₃₀₅	16.3	X	278.34749	355.52668	341.14560	6.50803	0.0758141	0.21569639	2.7536419	20	5 24.7	20.1
341459 2007 TP ₃₀₇	16.0	X	120.25217	15.70238	20.23998	10.77475	0.1437126	0.18252838	3.0778618	20	2 27.4	20.6
341460 2007 TY ₃₀₇	16.6	X	246.55385	171.63840	116.13231	0.70043	0.0436393	0.19073621	2.9889177	20	2 21.4	20.7
341461 2007 TX ₃₁₃	16.2	X	242.70013	222.25914	96.25119	3.96784	0.1145330	0.19677319	2.9274676	20	3 20.3	20.7
341462 2007 TL ₃₁₄	16.4	X	319.98545	252.14317	50.85957	8.62590	0.1319518	0.21073213	2.7967193	20	6 2.2	19.6
341463 2007 TK ₃₁₅	16.7	X	120.49044	195.52203	214.71205	1.82495	0.0735408	0.18453989	3.0554648	20	3 1.9	21.2
341464 2007 TL ₃₁₅	16.4	X	181.68208	160.12579	222.74117	1.29018	0.2050780	0.19379226	2.9574115	20	4 6.2	21.4
341465 2007 TN ₃₁₅	17.1	X	150.23250	123.79071	215.72831	0.58341	0.1658871	0.17934625	3.1141619	20	1 19.6	22.0
341466 2007 TS ₃₁₅	15.8	X	151.02075	328.92693	65.56276	3.77128	0.1685587	0.18850411	3.0124661	20	3 25.9	20.6
341467 2007 TG ₃₁₇	15.8	X	84.66146	56.32256	63.86033	9.61087	0.0810629	0.18916178	3.0054797	20	4 18.5	20.0
341468 2007 TN ₃₁₉	15.8	X	149.52880	296.35702	56.12379	11.73310	0.1445908	0.17990083	3.1077586	20	2 5.8	20.8
341469 2007 TV ₃₁₉	16.2	X	213.24366	119.95669	199.58328	4.39262	0.1364468	0.18665892	3.0322864	20	2 18.7	21.2
341470 2007 TB ₃₂₄	16.0	X	78.90735	197.10981	277.24248	6.18934	0.0561510	0.18948803	3.0020288	20	3 24.2	20.2
341471 2007 TV ₃₂₉	16.3	X	79.51251	83.53070	10.64737	5.42122	0.1223211	0.18336102	3.0685371	20	3 14.1	20.3
341472 2007 TD ₃₃₀	15.9	X	38.44462	88.94285	6.20778	5.39305	0.1310494	0.17410155	3.1763934	20	1 16.6	19.7
341473 2007 TG ₃₃₄	16.4	X	235.54506	332.40382	31.86471	8.86315	0.0698771	0.19925812	2.9030779	20	5 9.0	20.7
341474 2007 TO ₃₄₄	16.1	X	127.25832	247.28535	164.36963	6.60714	0.1061805	0.18651204	3.0338781	20	3 16.2	20.5
341475 2007 TJ ₃₅₃	16.4	X	163.91169	358.98193	44.06875	2.91643	0.0943984	0.19520761	2.9430991	20	4 11.8	20.7
341476 2007 TK ₃₅₄	15.6	X	162.45050	251.42797	132.72644	12.55798	0.1184091	0.19068926	2.9894083	20	3 23.4	20.4
341477 2007 TC ₃₆₂	15.5	X	328.25336	355.58345	229.64265	12.56155	0.1395689	0.18515809	3.0486501	20	2 27.9	19.7
341478 2007 TD ₃₆₂	16.2	X	203.36632	286.18274	68.06978	3.05271	0.0731550	0.18913407	3.0057731	20	3 25.3	20.7
341479 2007 TE ₃₆₂	16.6	X	57.60575	336.17126	148.15586	1.05765	0.1190336	0.18121111	3.0927597	20	3 20.2	20.5
341480 2007 TF ₃₆₃	15.9	X	48.04428	99.43884	79.74636	3.34209	0.0106928	0.19302568	2.9652364	20	5 3.8	19.9
341481 2007 TK ₃₆₃	15.4	X	148.30244	250.68229	66.59668	8.58155	0.0783515	0.16840008	3.2476896	20	—	—
341482 2007 TO ₃₆₃	15.8	X	179.52380	157.92121	229.09782	10.87022	0.0182163	0.18878366	3.0094914	20	4 3.7	20.2
341483 2007 TN ₃₆₄	15.8	X	148.44646	141.36837	223.07758	10.82174	0.1266547	0.18278608	3.0749683	20	2 8.9	20.8
341484 2007 TP ₃₆₅	16.6	X	253.89756	215.82812	135.85574	2.94558	0.0787519	0.20726569	2.8278157	20	5 15.6	20.6
341485 2007 TX ₃₆₅	16.7	X	225.14852	204.47803	133.19731	2.84208	0.0316742	0.19789194	2.9164238	20	3 30.2	20.9
341486 2007 TE ₃₆₈	15.4	X	195.54839	81.41152	236.15574	10.24322	0.0584915	0.17913170	3.1166480	20	1 29.7	20.3
341487 2007 TK ₃₇₁	15.2	X	151.44474	238.68675	92.07272	18.50389	0.2846689	0.18050120	3.1008636	20	1 20.7	20.6
341488 2007 TZ ₃₇₅	16.9	X	302.17667	322.41311	323.50336	5.03444	0.0313165	0.20378410	2.8599329	20	4 25.9	20.8
341489 2007 TN ₃₇₉	16.6	X	235.97693	319.82048	34.41111	2.33505	0.0836678	0.20209437	2.8758522	20	4 26.5	20.8
341490 2007 TV ₃₈₀	15.6	X	127.10611	319.48796	44.91219	10.52892	0.0975314	0.17888078	3.1195618	20	1 21.5	20.3
341491 2007 TN ₃₈₁	16.1	X	356.06339	191.71786	59.81575	6.72937	0.0231012	0.20319762	2.8654333	20	5 27.6	19.9
341492 2007 TP ₃₈₁	17.1	X	286.12424	124.91831	205.24381	1.38166	0.0768529	0.20584761	2.8407881	20	5 28.4	20.9
341493 2007 TZ ₃₈₁	15.8	X	349.04279	112.23185	59.67554	6.47545	0.0916963	0.18101482	3.0949951	20	2 5.4	19.8
341494 2007 TA ₃₈₅	15.7	X	276.64138	201.96657	93.11712	12.36923	0.0308239	0.19115424	2.9845584	20	4 14.1	20.1
341495 2007 TF ₃₈₈	16.4	X	325.50407	156.72558	177.49301	6.39160	0.0321479	0.21808234	2.7335208	20	8 3.5	20.0
341496 2007 TZ ₃₉₀	15.6	X	246.72192	234.69466	26.80981	12.42620	0.2454354	0.18886001	3.0086803	20	1 9.5	21.0
341497 2007 TL ₃₉₂	15.9	X	187.29696	277.35832	27.17780	11.78215	0.1403875	0.18362141	3.0656354	20	1 13.5	21.0
341498 2007 TG ₃₉₃	16.5	X	351.35971	268.14387	7.85993	7.05653	0.0447335	0.21642783	2.7474343	20	6 23.5	20.0
341499 2007 TH ₃₉₉	16.4	X	176.58033	71.01236	266.18205	3.59630	0.1212678	0.18401568	3.0612549	20	2 6.4	21.3
341500 2007 TL ₃₉₉	16.1	X	71.07692	249.57241	199.44594	13.61369	0.2026252	0.18050681	3.1007992	20	3 3.9	20.1
341501 2007 TX ₄₀₃	15.6	X	270.63530	185.04727	30.36896	12.32725	0.1140405	0.17399107	3.1777380	20	—	—
341502 2007 TN ₄₀₅	16.0	X	200.67830	288.86095	37.69489	10.61788	0.0862410	0.18478805	3.0527188	20	2 22.3	20.8
341503 2007 TO ₄₀₅	16.0	X	148.88884	315.39808	37.58164	11.03568	0.0778281	0.17864984	3.1222497	20	1 30.7	20.8
341504 2007 TQ ₄₀₅	16.5	X	110.30570	78.80290	41.84184	7.40954	0.1876069	0.19198737	2.9759179	20	5 29.5	21.1
341505 2007 TV ₄₀₅	15.9	X	157.87979	146.67563	224.81763	6.44648	0.1392892	0.18512550	3.0490079	20	2 28.3	20.9
341506 2007 TG ₄₀₈	16.0	X	129.32694	132.72291	224.96004	9.64103	0.0861097	0.17341453	3.1847773	20	1 11.3	20.8
341507 2007 TB ₄₁₀	18.1	X	326.02818	126.67768	217.71945	20.06862	0.0672055	0.37364983	1.9090891	20	9 4.3	20.1
341508 2007 TC ₄₁₀	17.1	X	130.86248	56.83731	30.52530	16.33614	0.2585523	0.19056700	2.9906867	20	5 11.9	22.2
341509 2007 TD ₄₁₄	16.3	X	151.87923	6.11060	30.77370	6.23265	0.2186600	0.18917193	3.0053721	20	4 1.0	21.2
341510 2007 TP ₄₁₈	15.7	X	231.08992	269.74033	88.53326	10.60824	0.1191682	0.19899192	2.9056664	20	4 27.7	20.3
341511 2007 TS ₄₁₈	16.5	X	326.81663	337.67589	209.56159	9.53811	0.0676772	0.18194764	3.0844076	20	1 22.4	20.8
341512 2007 TC ₄₁₉	15.4	X	110.93702	287.53439	108.52261	12.05854	0.1265479	0.17937908	3.1137818	20	2 13.2	19.9
341513 2007 TB ₄₂₀	15.3	X	144.86901	27.19094								

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341521 2007 TG ₄₃₂	16.5	X	102.21124	136.53593	327.39008	1.90483	0.1029097	0.19192287	2.9765846	20	4 18.8	20.8
341522 2007 TL ₄₃₂	16.4	X	178.92115	189.24222	194.31247	3.07474	0.0797975	0.19325851	2.9628543	20	4 2.5	20.7
341523 2007 TT ₄₃₂	16.1	X	73.26322	238.86357	211.24854	14.41711	0.0804235	0.18336839	3.0684549	20	2 18.1	20.5
341524 2007 TL ₄₃₄	15.8	X	284.00223	27.99368	250.19612	9.28476	0.0295435	0.19157705	2.9801656	20	3 22.6	20.1
341525 2007 TU ₄₃₅	16.2	X	272.89001	86.45990	218.29432	7.24633	0.1006396	0.19740918	2.9211767	20	4 3.8	20.3
341526 2007 TT ₄₄₀	15.7	X	93.75283	144.39808	275.46868	9.80478	0.1261440	0.18260275	3.0770260	20	2 14.9	20.1
341527 2007 TF ₄₄₁	16.1	X	225.68430	269.97317	80.45581	4.73804	0.0838677	0.19898877	2.9056971	20	4 12.8	20.4
341528 2007 TR ₄₄₁	16.1	X	164.73417	114.59931	225.32625	8.62003	0.0889227	0.18543585	3.0456050	20	1 25.7	20.9
341529 2007 TT ₄₄₂	15.4	X	78.91133	158.77813	270.33839	16.16441	0.0689681	0.17965319	3.1106138	20	1 29.6	19.9
341530 2007 TC ₄₄₃	16.2	X	185.58827	255.19573	94.93389	10.04746	0.1707622	0.19181876	2.9776615	20	3 6.3	21.2
341531 2007 TQ ₄₄₃	15.8	X	351.18996	315.41932	231.89251	9.78050	0.0175198	0.18972238	2.9995562	20	2 25.4	20.1
341532 2007 TR ₄₄₃	15.9	X	89.39519	79.14756	19.19250	10.68395	0.0581814	0.18546026	3.0453378	20	3 23.8	20.0
341533 2007 TX ₄₄₄	16.5	X	163.97730	72.84190	5.66167	10.78434	0.1848454	0.19839022	2.9115385	20	5 25.3	21.5
341534 2007 TY ₄₄₄	16.0	X	168.07838	331.21660	16.32672	9.68934	0.0408068	0.18287085	3.0740179	20	2 10.5	20.6
341535 2007 TO ₄₄₅	16.3	X	244.26100	11.38074	338.33625	1.68109	0.1176750	0.20236268	2.8733097	20	4 25.9	20.6
341536 2007 TT ₄₄₅	15.8	X	45.80443	73.26672	32.95464	14.59539	0.0431310	0.17826771	3.1267099	20	2 9.1	20.3
341537 2007 TH ₄₄₆	16.5	X	182.19711	63.57863	319.41051	4.63497	0.0737334	0.19606874	2.9344754	20	4 2.9	20.9
341538 2007 TZ ₄₄₆	15.6	X	183.00023	268.61664	96.30333	9.71754	0.1077644	0.19024263	2.9940852	20	3 20.9	20.4
341539 2007 TE ₄₄₉	15.8	X	72.21755	233.37011	199.47374	11.24875	0.0829756	0.17762909	3.1341996	20	1 29.4	20.2
341540 2007 TA ₄₅₁	15.8	X	336.84849	17.21063	206.36140	10.39945	0.0287286	0.19139678	2.9820365	20	3 24.7	19.8
341541 2007 TL ₄₅₂	16.5	X	241.32048	325.58443	23.08972	5.59350	0.1346829	0.19916047	2.9040268	20	4 20.3	21.1
341542 2007 TN ₄₅₂	15.7	X	99.07218	59.23354	33.25620	15.93103	0.2065295	0.18278609	3.0749681	20	4 17.3	20.2
341543 2007 TA ₄₅₃	15.8	X	290.48024	25.81877	224.56981	8.21424	0.1363279	0.18255412	3.0775725	20	2 12.4	20.3
341544 2007 UC ₁	16.5	X	114.54209	256.34801	165.84412	2.62792	0.1882893	0.18615984	3.0377035	20	3 24.7	21.0
341545 2007 UF ₃	15.5	X	190.77151	246.56568	69.31588	10.90633	0.0887709	0.18086771	3.0966731	20	1 27.9	20.2
341546 2007 UG ₃	16.2	X	141.92075	239.86524	140.26447	5.36510	0.1719339	0.18457127	3.0551086	20	2 29.4	21.1
341547 2007 UV ₄	15.7	X	152.43019	97.34275	12.76568	15.02511	0.1046114	0.20578301	2.8413826	20	6 22.3	20.3
341548 2007 UW ₄	16.3	X	142.47810	9.93673	11.80054	10.89820	0.1152197	0.18619631	3.0373068	20	2 29.5	21.0
341549 2007 UX ₇	15.7	X	196.49481	95.00283	273.39759	8.80311	0.0951461	0.19180070	2.9778484	20	3 28.9	20.5
341550 2007 UC ₈	15.4	X	211.96099	74.35661	268.29664	7.71515	0.1010625	0.19211524	2.9745972	20	3 13.6	20.1
341551 2007 UN ₁₁	16.4	X	163.24730	255.70398	118.82777	3.69816	0.2981936	0.18959759	3.0008722	20	3 18.7	21.8
341552 2007 UM ₂₁	16.6	X	211.47606	199.35835	199.85824	3.86985	0.1256043	0.20335856	2.8639213	20	5 24.5	21.0
341553 2007 UZ ₂₁	16.3	X	95.95305	284.37368	204.38596	4.55442	0.1291973	0.19283655	2.9671749	20	5 17.9	20.5
341554 2007 UK ₂₂	15.8	X	1.58565	290.96287	211.92485	10.76871	0.0263543	0.17767461	3.1336643	20	1 18.3	20.3
341555 2007 UZ ₂₂	16.5	X	188.36728	301.67668	90.11058	3.44928	0.0973082	0.19594741	2.9356866	20	4 23.8	21.0
341556 2007 UX ₂₃	15.9	X	128.39651	290.48511	125.24839	3.12020	0.0881928	0.18684075	3.0303187	20	3 21.1	20.4
341557 2007 UD ₂₄	16.7	X	11.59936	269.69271	86.04567	4.33675	0.0775132	0.22852231	2.6496203	20	11 16.1	20.0
341558 2007 UZ ₂₄	16.3	X	95.73427	175.29928	181.68159	4.96866	0.1296754	0.16930731	3.2360775	20	—	—
341559 2007 UU ₂₅	16.1	X	181.78090	116.38292	223.21928	7.59210	0.0973303	0.18300823	3.0724793	20	2 11.6	20.9
341560 2007 UF ₃₃	15.3	X	135.78705	130.84714	253.94163	15.28437	0.1609420	0.18370322	3.0647252	20	2 20.2	20.4
341561 2007 US ₃₆	16.2	X	200.43370	308.97063	18.76084	10.41989	0.0987598	0.18676620	3.0311251	20	2 22.4	21.0
341562 2007 UE ₃₉	16.1	X	140.97752	357.32785	20.12413	11.75690	0.1381718	0.18452568	3.0556117	20	2 26.4	20.9
341563 2007 UG ₄₀	15.4	X	40.95954	39.98407	88.58987	11.64838	0.0410076	0.18290533	3.0736316	20	2 27.8	19.7
341564 2007 UH ₄₃	16.2	X	213.54675	259.65104	85.79838	2.39239	0.0939077	0.19433099	2.9519433	20	3 23.9	20.6
341565 2007 UR ₄₃	16.7	X	159.63059	320.57363	131.36761	2.94606	0.0230304	0.20312578	2.8661089	20	6 4.0	20.7
341566 2007 UJ ₄₆	15.4	X	238.55804	56.61506	225.66424	13.64677	0.0871082	0.18472705	3.0533907	20	1 29.7	20.4
341567 2007 UP ₄₈	15.5	X	163.17217	299.05012	67.73098	11.48688	0.1172787	0.18297247	3.0728797	20	3 5.9	20.5
341568 2007 UC ₄₉	15.9	X	90.97873	217.85426	208.44455	12.97645	0.0780179	0.17971789	3.1098672	20	2 12.7	20.4
341569 2007 UG ₅₁	15.2	X	133.15012	283.03750	71.60438	27.38560	0.1724777	0.17581957	3.1556676	20	1 25.2	20.4
341570 2007 UJ ₅₄	16.2	X	114.67353	56.94242	14.28886	1.67163	0.1597040	0.18559410	3.0438735	20	4 1.1	20.5
341571 2007 UP ₅₅	16.4	X	118.24027	240.19152	224.18786	7.87095	0.2492880	0.19029391	2.9935473	20	5 24.5	21.2
341572 2007 UW ₅₅	16.7	X	128.18791	187.58392	156.44512	0.58447	0.2279477	0.17466622	3.1695439	20	1 4.8	21.4
341573 2007 UM ₅₇	15.9	X	327.54633	351.03098	222.18224	9.82421	0.1081202	0.18563118	3.0434682	20	2 17.3	20.1
341574 2007 UN ₅₇	16.3	X	267.22936	123.82592	222.40106	4.62116	0.0671810	0.20363214	2.8613556	20	5 26.2	20.2
341575 2007 UJ ₆₀	16.5	X	130.60828	142.65332	310.14260	0.41678	0.0481673	0.19345431	2.9608548	20	5 2.3	20.6
341576 2007 UH ₆₁	15.6	X	343.99320	351.77609	226.50523	9.57327	0.0495806	0.18885006	3.0087860	20	3 24.9	19.7
341577 2007 UU ₆₁	16.1	X	97.09799	235.79676	219.36288	12.55738	0.2163688	0.18763385	3.0211736	20	4 17.4	20.5
341578 2007 UB ₆₃	16.7	X	206.08034	166.05683	197.35576	0.81244	0.1084435	0.19358975	2.9594736	20	4 5.4	21.3
341579 2007 UA ₆₇	16.4	X	103.88732	81.06316	19.31099	9.74567	0.0057824	0.19508664	2.9443156	20	4 3.8	20.4
341580 2007 UE ₇₇	16.6	X	149.37734	46.43538	327.03804	1.49308	0.1761165	0.18430558	3.0580440	20	2 27.9	21.5
341581 2007 UN ₇₇	16.0	X	166.80702	251.04790	140.68181	3.11079	0.1081207	0.18987720	2.9979255	20	4 2.5	20.6
341582 2007 UJ ₈₁	16.3	X	133.78617	274.94254	160.02481	4.65517	0.1126340	0.19454162	2.9498122	20	4 21.9	20.7
341583 2007 UP ₈₂	15.7	X	87.29398	235.87444	228.93544	10.47666	0.0725759	0.18712664	3.0272316	20	3 25.9	20.0
341584 2007 UY ₈₂	16.4	X	107.89967	37.88159	40.94560	1.43033	0.1794570	0.18492778	3.0511808	20	4 5.8	20.9
341585 2007 UZ ₈₅	16.1	X	130.93260	326.26796	69.11777	3.57068	0.1018903	0.18265086	3.0764857	20	3 1.8	20.7
341586 2007 UL ₈₇	16.1	X	193.86281	31.32719	303.31574	1.36125	0.0957261	0.18406625	3.0606942	20	2 19.9	20.9
341587 2007 UT ₈₈	16.4	X	35.64285	268.46523	227.95107	6.96287	0.0585442	0.18204105	3.0833524	20	2 23.5	20.5
341588 2007 UB ₈₉	16.3	X	34.31261	75.55151	46.58947	5.27717	0.0917937	0.17773225	3.1329867	20	2 11.4	20.2
341589 2007 UJ ₈₉	17.0	X	211.67824	305.06921	73.57955	1.70295	0.0637539	0.19677025	2.9274968	20	5 2.2	21.2
341590 2007 UM ₉₀	15.8	X	41.29953	263.98338	224.70287	11.77488	0.0752459	0.18248308	3.0783711	20	2 21.1	20.0
341591 2007 UF ₉₄	15.6	X	39.30376	47.11665	34.18705	11.71576	0.0668592	0.17265135	3.1941556	20	—	—
341592 2007 UH ₉₇	16.5	X	262.86738	246.76439	52.38949	4.14415	0.0992622	0.19339753	2.9614342	20	3 19.9	20.9
341593 2007 UH ₉₈	15.7	X	11.17360	277.19560	235.69487	11.03305	0.0992482					

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
341601	2007	UW ₁₀₅	14.7	X	260.58474	137.41028	220.45568	10.72775	0.1913543	0.12431230	3.9761246	20	5 17.8	20.6
341602	2007	UG ₁₀₇	15.7	X	142.12226	260.85873	131.40888	13.55130	0.1889955	0.18615807	3.0377228	20	3 19.1	20.7
341603	2007	UV ₁₀₇	16.9	X	199.79611	63.78673	294.19522	1.45925	0.1006541	0.19500251	2.9451624	20	3 23.1	21.4
341604	2007	UH ₁₀₈	15.8	X	78.40346	50.00283	40.90823	9.22195	0.0891598	0.18192492	3.0846644	20	3 7.5	20.0
341605	2007	UH ₁₁₄	15.7	X	198.44927	74.60953	248.16061	7.30068	0.0971317	0.18344671	3.0675814	20	2 8.1	20.6
341606	2007	UA ₁₁₅	15.8	X	134.76518	182.55150	245.42861	8.74458	0.0622761	0.18939821	3.0029779	20	4 5.0	20.3
341607	2007	UP ₁₁₈	16.9	X	250.74895	318.41679	18.19225	2.08313	0.0999114	0.19893621	2.9062089	20	4 19.2	21.2
341608	2007	UD ₁₂₄	16.2	X	314.61082	61.45889	222.05375	8.56129	0.0729561	0.20229384	2.8739615	20	5 6.9	19.9
341609	2007	UP ₁₂₅	15.7	X	143.16290	203.63862	227.53596	10.28374	0.0906120	0.19112366	2.9848769	20	4 23.0	20.1
341610	2007	UL ₁₂₇	16.0	X	139.86855	149.28258	224.03171	10.29022	0.1511221	0.17897447	3.1184730	20	2 13.6	21.0
341611	2007	UP ₁₂₈	15.7	X	264.66169	27.09416	213.89755	13.10659	0.0614019	0.17619733	3.1511555	20	1 14.0	20.5
341612	2007	UW ₁₂₈	15.8	X	184.71650	96.47548	255.67079	6.98238	0.1244253	0.18508471	3.0494559	20	2 29.0	20.8
341613	2007	UD ₁₂₉	16.0	X	178.69972	96.54788	248.41827	9.22960	0.1273641	0.18191774	3.0847455	20	2 14.9	21.1
341614	2007	UH ₁₃₀	16.0	X	300.53369	354.02990	218.45355	4.68748	0.0605414	0.18026146	3.1036123	20	1 22.5	20.3
341615	2007	UJ ₁₃₁	14.9	X	294.19131	281.04159	265.73065	15.90961	0.0189957	0.17205475	3.2015351	20	—	—
341616	2007	UT ₁₃₁	16.0	X	157.59109	212.27665	192.91266	10.26306	0.1126852	0.18915988	3.0054997	20	4 9.1	20.7
341617	2007	UP ₁₃₂	16.2	X	207.89888	89.11274	239.44469	8.19865	0.1333965	0.18882766	3.0090239	20	2 22.0	21.1
341618	2007	UQ ₁₃₂	16.3	X	92.46185	1.80834	80.81393	2.63970	0.0317789	0.18240966	3.0791971	20	3 4.1	20.5
341619	2007	UJ ₁₃₃	15.9	X	322.65329	349.53675	220.13509	14.00872	0.0770425	0.18453474	3.0555117	20	2 9.2	20.4
341620	2007	US ₁₃₇	15.6	X	59.54825	273.78614	192.77274	10.95491	0.1284980	0.17786319	3.1314489	20	2 28.5	19.7
341621	2007	UW ₁₃₈	16.0	X	131.67700	104.58093	259.27483	8.09761	0.0530087	0.17726871	3.1384460	20	1 16.9	20.6
341622	2007	UD ₁₃₉	15.8	X	150.05474	124.78387	279.76576	8.83016	0.1027636	0.18923038	3.0047532	20	3 25.9	20.6
341623	2007	UG ₁₃₉	15.5	X	304.14650	288.72247	266.65778	7.77343	0.0381395	0.17386241	3.1793055	20	1 11.1	20.1
341624	2007	UC ₁₄₁	16.1	X	54.02745	269.34596	201.82707	9.08793	0.0938722	0.17972389	3.1097980	20	2 21.6	20.2
341625	2007	VK ₁	15.7	X	23.06380	16.15220	130.85834	11.15550	0.0358772	0.18496911	3.0507263	20	2 23.1	19.7
341626	2007	VT ₂	16.1	X	150.13962	322.52255	53.31073	3.76748	0.1555573	0.18386555	3.0629210	20	3 2.8	20.9
341627	2007	VN ₄	16.0	X	129.34160	241.09804	138.79127	7.99263	0.1812449	0.18138836	3.0907445	20	2 18.2	20.8
341628	2007	VY ₈	16.0	X	128.40994	145.08621	250.16336	8.85564	0.0819358	0.18098344	3.0953528	20	2 19.9	20.8
341629	2007	VG ₉	16.2	X	137.26320	237.51572	152.14436	5.98658	0.1455423	0.18289335	3.0737658	20	3 4.7	20.8
341630	2007	VD ₁₀	15.4	X	160.16789	133.87767	235.45174	8.61374	0.0928775	0.18657685	3.0331755	20	2 23.6	20.2
341631	2007	VT ₁₂	15.8	X	147.16784	299.83460	36.62518	16.79024	0.2266998	0.17784842	3.1316223	20	1 23.5	21.2
341632	2007	VM ₁₃	16.9	X	109.52406	198.85159	232.68839	3.21926	0.1286843	0.18554360	3.0444258	20	3 10.7	21.4
341633	2007	VB ₁₆	16.5	X	39.01406	11.56346	232.89464	4.03305	0.1108266	0.21381306	2.7697882	20	7 28.8	20.0
341634	2007	VQ ₁₆	15.7	X	80.61671	52.44704	44.67986	12.53885	0.1317652	0.18443449	3.0566189	20	3 25.2	19.9
341635	2007	VS ₁₈	16.3	X	346.47848	100.56476	104.49585	2.10859	0.0793606	0.18933506	3.0036456	20	3 13.1	20.0
341636	2007	VG ₂₅	15.4	X	106.96018	3.77565	25.03451	18.18547	0.1886152	0.17684271	3.1434842	20	2 15.0	20.3
341637	2007	VU ₂₅	16.2	X	264.52681	283.33806	10.78639	9.09900	0.1309474	0.19277767	2.9224747	20	3 11.8	20.6
341638	2007	VN ₂₈	16.4	X	133.54646	52.91807	28.20864	7.72420	0.1867049	0.19135851	2.9824341	20	5 3.4	21.1
341639	2007	VB ₂₉	16.5	X	159.33809	314.99866	24.10389	1.49381	0.1771820	0.18039770	3.1020495	20	1 29.2	21.5
341640	2007	VS ₃₁	16.4	X	125.48947	193.14218	248.08097	8.67176	0.1075215	0.19099541	2.9862128	20	4 16.5	20.9
341641	2007	VK ₃₃	16.3	X	160.79796	36.41196	321.47805	2.36735	0.1242991	0.18398160	3.0616329	20	2 16.8	21.1
341642	2007	VL ₃₃	16.6	X	123.26750	53.20484	16.27900	4.52849	0.0789479	0.18832075	3.0144212	20	3 29.9	21.0
341643	2007	VM ₃₈	16.3	X	142.41823	105.47034	296.41351	8.93158	0.1174330	0.18801896	3.0176459	20	3 16.4	21.1
341644	2007	VN ₃₈	15.7	X	167.94593	97.03722	255.81916	15.47539	0.1414321	0.18539177	3.0460877	20	2 11.8	20.8
341645	2007	VO ₄₃	15.9	X	46.91695	165.91383	300.61849	6.15028	0.1751685	0.17650512	3.1474911	20	2 14.8	19.5
341646	2007	VC ₄₄	15.4	X	127.60418	344.85589	27.47575	15.56710	0.0421051	0.17743685	3.1364630	20	1 27.5	20.2
341647	2007	VD ₄₆	15.1	X	164.19339	72.32758	250.74732	10.39699	0.0720809	0.17625917	3.1504184	20	1 6.8	19.9
341648	2007	VL ₄₆	16.7	X	124.66846	111.70753	293.72584	4.03821	0.1548165	0.18395162	3.0619656	20	3 9.3	21.4
341649	2007	VK ₄₉	16.1	X	211.51571	23.57890	282.90958	5.57704	0.1072284	0.18240115	3.0792929	20	2 3.3	20.9
341650	2007	VQ ₅₁	16.0	X	199.41767	291.80242	34.85644	11.16469	0.0523648	0.18283275	3.0744449	20	2 21.6	20.7
341651	2007	VZ ₅₁	16.1	X	144.24431	321.54710	5.77366	4.40060	0.0943975	0.17193173	3.2030621	20	—	—
341652	2007	VG ₅₂	16.1	X	73.71315	42.97128	36.97692	10.94780	0.0833330	0.17775498	3.1327197	20	2 17.2	20.5
341653	2007	VR ₅₂	16.4	X	181.48661	156.84573	203.94669	7.81028	0.1244623	0.18733902	3.0249431	20	3 8.4	21.3
341654	2007	VO ₅₅	16.2	X	107.48434	263.79806	187.24531	4.89805	0.2082558	0.18580482	3.0415718	20	4 24.2	20.7
341655	2007	VG ₅₉	16.3	X	160.49794	169.86255	255.81122	8.41157	0.0508270	0.19321122	2.9633378	20	5 1.9	20.6
341656	2007	VQ ₅₉	16.2	X	175.57913	58.54352	289.94595	3.49236	0.1518000	0.18300844	3.0724770	20	2 19.9	21.3
341657	2007	VT ₆₀	16.2	X	234.33792	284.61400	45.23934	8.00800	0.1746586	0.19332607	2.9621640	20	3 22.8	21.0
341658	2007	VU ₆₁	16.3	X	111.79441	59.83699	12.81483	2.38082	0.1145547	0.18356068	3.0663116	20	3 25.4	20.6
341659	2007	VC ₆₂	15.3	X	280.69201	313.35155	253.37586	8.92014	0.0518958	0.17027085	3.2238576	20	—	—
341660	2007	VZ ₆₂	16.5	X	194.66104	68.84054	249.26073	0.10582	0.1695294	0.18059204	3.0998236	20	2 2.9	21.5
341661	2007	VK ₆₃	16.3	X	114.24983	64.43747	356.11618	0.28268	0.1505532	0.18130802	3.0916574	20	3 17.9	20.9
341662	2007	VS ₆₄	16.0	X	112.74500	351.85336	54.64076	5.19260	0.0889278	0.17753627	3.1352920	20	2 23.4	20.5
341663	2007	VE ₇₂	15.4	X	134.73290	134.07562	240.32436	10.82653	0.1190209	0.17785229	3.1315768	20	2 6.4	20.3
341664	2007	VO ₇₃	15.8	X	44.20181	242.49866	249.13026	8.73522	0.1821924	0.17709034	3.1405530	20	3 11.3	19.7
341665	2007	VZ ₇₅	16.0	X	73.26390	4.01142	89.58651	2.77791	0.1383134	0.18043807	3.1015868	20	3 7.8	20.0
341666	2007	VK ₇₆	16.3	X	41.64938	14.10841	117.51236	2.20796	0.1392410	0.18052147	3.1006314	20	3 7.4	19.9
341667	2007	VE ₇₈	15.7	X	126.54919	356.49345	56.04161	13.37742	0.0596309	0.18500395	3.0503433	20	3 17.8	20.3
341668	2007	VR ₈₅	15.5	X	119.90856	44.58241	356.76683	11.87700	0.0402865	0.18439859	3.0570156	20	2 19.2	19.9
341669	2007	VF ₈₆	15.6	X	218.17301	38.75565	275.52185	7.80989	0.0670786	0.18741369	3.0241397	20	2 17.7	20.3
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ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341681 2007 VD ₁₀₄	16.4	X	166.77088	38.03619	307.02382	1.12815	0.2662698	0.18458441	3.0549636	20	2 14.4	21.7
341682 2007 VT ₁₀₅	15.8	X	45.76830	49.63844	53.24405	11.37264	0.1036762	0.17499997	3.1655127	20	2 7.8	20.0
341683 2007 VS ₁₀₇	16.0	X	249.62530	59.16192	233.29005	8.98085	0.0155934	0.18498978	3.0504991	20	3 1.0	20.6
341684 2007 VP ₁₀₉	16.7	X	259.72772	198.49615	258.76432	2.42367	0.1359199	0.22057910	2.7128544	20	9 30.6	20.2
341685 2007 VM ₁₁₀	16.2	X	176.77286	332.22937	47.95398	5.01473	0.1879704	0.18983363	2.9983842	20	3 31.9	21.3
341686 2007 VK ₁₁₅	16.0	X	46.70593	251.10307	217.19476	8.49677	0.0581125	0.17568811	3.1572415	20	2 4.9	20.3
341687 2007 VM ₁₁₈	16.0	X	123.71420	240.73455	137.24340	4.16476	0.1036136	0.17933814	3.1142557	20	1 31.9	20.6
341688 2007 VQ ₁₁₉	15.9	X	140.08282	219.68812	178.27012	7.50259	0.0422199	0.19034497	2.9930119	20	3 5.2	20.1
341689 2007 VF ₁₂₂	16.5	X	139.62034	337.92301	36.81616	6.18188	0.0123038	0.18489223	3.0515719	20	2 5.9	20.8
341690 2007 VM ₁₂₆	17.3	X	107.11390	35.94488	195.80617	22.28322	0.0458461	0.37711471	1.8973774	20	11 2.2	19.3
341691 2007 VT ₁₃₃	15.6	X	145.51449	39.01734	338.65513	10.30532	0.1546439	0.18406479	3.0607104	20	2 27.8	20.4
341692 2007 VD ₁₃₅	16.8	X	257.54270	344.51711	341.39419	1.30866	0.0739955	0.19977260	2.8980916	20	4 16.4	20.9
341693 2007 VH ₁₄₁	15.5	X	72.37646	198.87905	239.21245	10.50269	0.1529948	0.17698855	3.1417571	20	2 12.8	19.7
341694 2007 VR ₁₄₁	15.8	X	187.39111	112.68078	222.36297	9.68773	0.1084817	0.18289154	3.0737861	20	2 11.3	20.8
341695 2007 VU ₁₄₆	16.7	X	139.87588	326.01513	106.38078	0.29281	0.2183682	0.18370392	3.0647173	20	5 2.0	21.6
341696 2007 VJ ₁₄₇	16.3	X	221.57305	103.31900	221.66930	6.54494	0.0143653	0.18819932	3.0157176	20	2 28.4	21.6
341697 2007 VD ₁₅₂	15.6	X	238.89455	52.40055	208.87511	8.13501	0.0352269	0.17585040	3.1552987	20	1 13.2	20.3
341698 2007 VK ₁₅₃	16.1	X	131.65368	226.62692	197.48830	8.92486	0.0550884	0.19316289	2.9638320	20	3 28.9	20.4
341699 2007 VE ₁₅₄	16.1	X	154.96384	313.71753	78.61040	4.28365	0.2068092	0.18691240	3.0295443	20	3 29.6	21.2
341700 2007 VF ₁₆₀	16.2	X	130.91245	165.36133	208.26859	10.39433	0.0846794	0.17778499	3.1323671	20	1 29.8	21.0
341701 2007 VO ₁₆₁	16.2	X	37.43854	109.46476	22.93857	5.88640	0.0219590	0.18037030	3.1023636	20	2 24.7	20.4
341702 2007 VS ₁₆₆	15.7	X	123.44450	331.49073	70.70552	10.15424	0.2169379	0.18093521	3.0959028	20	3 18.1	20.7
341703 2007 VT ₁₆₇	15.5	X	178.88306	336.60465	61.80740	15.16668	0.0652726	0.19004294	2.9961822	20	4 25.0	20.1
341704 2007 VX ₁₆₈	16.0	X	73.27684	217.27935	244.11402	3.71555	0.1074465	0.17791161	3.1308807	20	3 10.3	20.3
341705 2007 VU ₁₇₂	17.0	X	195.21321	155.56133	179.98793	3.21784	0.2303972	0.18819229	3.0157928	20	2 22.3	22.2
341706 2007 VU ₁₇₃	15.7	X	145.50285	132.89000	275.98362	7.93666	0.1322205	0.18807408	3.0170564	20	3 29.6	20.6
341707 2007 VY ₁₇₃	16.7	X	207.53773	329.16136	351.60529	3.13556	0.1697142	0.18878646	3.0094617	20	2 16.4	21.7
341708 2007 VZ ₁₈₀	15.9	X	101.21373	21.38760	50.08946	12.13124	0.1036422	0.18407071	3.0606447	20	3 16.1	20.4
341709 2007 VE ₁₈₃	16.2	X	165.10948	123.88157	191.40085	7.28675	0.1693815	0.17731081	3.1379492	20	1 5.7	21.4
341710 2007 VM ₁₈₃	16.1	X	90.95742	158.89607	279.91218	7.84766	0.2206868	0.18025691	3.1036644	20	3 18.9	20.6
341711 2007 VO ₁₈₅	15.7	X	61.69231	269.70417	207.45937	15.38190	0.2162212	0.17808052	3.1289006	20	3 29.3	19.6
341712 2007 VF ₁₈₈	15.1	X	159.57309	267.22700	84.62688	17.41652	0.1430823	0.18193058	3.0846005	20	2 14.8	20.2
341713 2007 VC ₁₈₉	15.2	X	97.64217	194.61412	249.87621	13.96177	0.1422671	0.18194248	3.0844660	20	3 21.1	19.9
341714 2007 VS ₁₉₁	15.3	X	124.19544	143.23311	281.93694	12.47429	0.1752450	0.17885660	3.1198430	20	3 30.3	20.4
341715 2007 VF ₁₉₅	16.9	X	221.25572	130.62901	280.23826	2.59839	0.1350790	0.20954068	2.8073107	20	6 16.9	21.3
341716 2007 VQ ₁₉₉	16.9	X	112.28190	248.81205	237.33380	1.05723	0.0325483	0.19865687	2.9089326	20	5 20.7	21.0
341717 2007 VC ₂₀₇	15.1	X	307.13287	149.45148	73.10896	12.77197	0.0792208	0.18223788	3.0811318	20	2 14.8	19.5
341718 2007 VM ₂₁₁	16.4	X	232.80448	301.73616	24.48222	5.98575	0.1335889	0.19206666	2.9750988	20	3 18.2	21.1
341719 2007 VV ₂₁₁	15.9	X	48.38162	278.86359	214.68669	7.97198	0.0251132	0.18397359	3.0617219	20	3 5.9	20.2
341720 2007 VE ₂₁₂	15.8	X	195.91148	267.11254	70.11844	11.22327	0.3041934	0.19033095	2.9931588	20	3 1.5	21.5
341721 2007 VF ₂₁₃	15.6	X	104.05141	354.87661	78.44745	9.39492	0.1162019	0.18323631	3.0699292	20	3 22.4	20.1
341722 2007 VM ₂₁₅	16.1	X	240.86847	249.79474	49.94389	16.18171	0.0395161	0.18385663	3.0630202	20	3 10.2	20.8
341723 2007 VC ₂₁₈	15.7	X	171.46894	267.18898	68.77012	11.50045	0.2043069	0.18054304	3.1003844	20	2 9.1	21.1
341724 2007 VG ₂₁₉	15.7	X	124.98393	352.06181	60.62673	6.49019	0.1292256	0.18155587	3.0888432	20	3 20.7	20.4
341725 2007 VL ₂₁₉	15.5	X	94.89965	163.14357	254.49083	9.17555	0.0916287	0.17535536	3.1612343	20	2 9.9	20.1
341726 2007 VB ₂₂₂	15.9	X	180.28239	299.95295	90.34741	12.71382	0.1332249	0.19225266	2.9731796	20	4 19.2	20.8
341727 2007 VF ₂₂₈	15.6	X	185.89096	71.37716	258.01762	14.98346	0.2246725	0.18430274	3.0580754	20	2 3.9	21.1
341728 2007 VF ₂₂₉	15.6	X	60.20579	229.16003	241.94443	8.58451	0.0581989	0.18090426	3.0962559	20	2 24.8	19.9
341729 2007 VJ ₂₂₉	16.5	X	225.39235	99.57412	42.92205	5.63455	0.0406503	0.22413390	2.6840938	20	10 31.2	20.0
341730 2007 VN ₂₃₂	16.1	X	107.18604	325.78522	59.03247	3.10933	0.1178859	0.17459140	3.1704493	20	1 24.8	20.5
341731 2007 VR ₂₃₂	16.4	X	147.20660	191.26808	224.48411	1.77374	0.1457327	0.18871863	3.0101828	20	4 13.2	21.0
341732 2007 VL ₂₄₀	16.3	X	56.48989	284.12744	176.12078	9.26167	0.2511233	0.17617485	3.1514235	20	3 5.3	19.8
341733 2007 VN ₂₄₁	16.2	X	182.85988	205.42369	122.48004	9.12419	0.3575272	0.18872286	3.0101378	20	2 8.8	21.9
341734 2007 VT ₂₄₃	15.5	X	161.66666	293.26685	167.61772	9.65321	0.1100781	0.18168126	3.0874218	20	2 24.9	20.4
341735 2007 VQ ₂₄₅	15.8	X	27.83500	266.98613	279.54301	9.88321	0.0240595	0.19201692	2.9756126	20	4 11.9	20.0
341736 2007 VG ₂₅₀	15.8	X	132.02283	284.52107	80.56349	18.01061	0.1322160	0.17804128	3.1293604	20	2 1.2	20.7
341737 2007 VF ₂₅₂	16.0	X	160.36801	250.47980	149.33293	3.10300	0.1041516	0.18996372	2.9970152	20	4 5.5	20.6
341738 2007 VK ₂₅₄	15.6	X	110.64443	32.94163	98.82750	16.36832	0.2026277	0.19194118	2.9763953	20	6 16.5	20.3
341739 2007 VU ₂₅₅	15.6	X	28.37462	248.68282	268.69633	8.95389	0.0589144	0.18339915	3.0681117	20	3 8.6	19.8
341740 2007 VQ ₂₅₇	15.8	X	189.78920	15.50862	1.18621	4.02995	0.1462107	0.19174379	2.9784376	20	4 5.1	20.6
341741 2007 VG ₂₆₅	16.4	X	102.15759	68.00547	41.80025	4.56235	0.1250980	0.18613872	3.0379333	20	4 30.3	20.8
341742 2007 VB ₂₆₆	15.4	X	118.11208	171.40614	255.10036	11.94967	0.0473073	0.18173797	3.0867794	20	3 10.5	20.1
341743 2007 VB ₂₆₇	15.8	X	61.47189	303.04836	180.30028	16.52096	0.1984019	0.17766441	3.1337842	20	4 6.6	19.7
341744 2007 VL ₂₆₇	16.4	X	74.79309	86.39800	63.61315	3.06834	0.1163282	0.19014606	2.9950988	20	5 15.9	20.4
341745 2007 VR ₂₆₈	16.2	X	102.70398	310.29752	151.43012	3.01123	0.1632818	0.18753533	3.0228319	20	4 26.9	20.6
341746 2007 VD ₂₇₀	15.6	X	115.50174	149.36411	266.15928	8.57360	0.0600624	0.18008175	3.1056767	20	2 26.7	20.2
341747 2007 VJ ₂₇₅	17.0	X	143.86473	258.86953	117.21544	0.40053	0.2034824	0.18156959	3.0886875	20	2 28.6	22.0
341748 2007 VU ₂₇₅	15.6	X	144.90466	160.85553	236.08897	8.46115	0.0386916	0.18311845	3.0712463	20	3 6.9	20.2
341749 2007 VF ₂₈₀	16.2	X	334.88257	347.18296	234.59261	9.54104	0.0512995	0.18751752	3.0230322	20	3 15.8	20.4
341750 2007 VM ₂₈₄	15.8	X	143.02237	194.44646	235.53504	9.01240	0.1219817	0.18960711	3.0007718	20	4 23.7	20.4
341751 2007 VS ₂₈₆	16.2	X	347.01886	133.21108	67.36580	6.05454	0.0901982	0.17944249	3.1130483	20	3 10.7	20.2
341752 2007 VZ ₂₉₄	16.1	X	161.06138	164.92550	210.60214	9.15609	0.1010490	0.18591720	3.0403459	20	3 4.4	20.9
341753 2007 VG ₂₉₇	1											

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341761 2007 VJ ₃₁₉	15.8	X	246.38324	43.80287	246.25944	9.20531	0.0783890	0.18559859	3.0438245	20	2 17.0	20.6
341762 2007 VS ₃₂₁	15.5	X	205.50861	261.62331	63.75124	16.91249	0.0993150	0.18238856	3.0794346	20	2 29.0	20.6
341763 2007 VK ₃₂₆	15.9	X	182.80510	329.04608	58.83203	11.13365	0.0661824	0.19477100	2.9474957	20	4 15.4	20.4
341764 2007 VZ ₃₂₆	16.3	X	76.04754	245.30392	228.69726	4.23265	0.1006434	0.18252808	3.0778651	20	3 28.9	20.5
341765 2007 VF ₃₂₈	16.1	X	162.51867	59.83135	313.99622	7.93793	0.1497166	0.18588657	3.0406799	20	3 6.9	21.0
341766 2007 VY ₃₂₉	16.2	X	143.79957	121.50053	289.71319	13.20984	0.2872360	0.18513507	3.0489029	20	4 8.1	21.8
341767 2007 VC ₃₃₀	16.7	X	94.80951	236.37916	181.87074	1.99309	0.1797929	0.17648457	3.1477354	20	2 26.1	21.1
341768 2007 VZ ₃₃₀	16.2	X	82.37881	228.62796	237.73320	4.23447	0.1298787	0.18241126	3.0791792	20	3 31.8	20.5
341769 2007 VG ₃₃₃	16.4	X	81.06672	280.25605	179.73037	1.67666	0.0652633	0.18001927	3.1063952	20	3 14.5	20.5
341770 2007 VX ₃₃₄	16.4	X	139.63231	228.47308	137.36051	2.30096	0.1893636	0.17801782	3.1296353	20	2 12.2	21.2
341771 2007 VA ₃₃₅	15.7	X	131.36509	264.12051	77.30960	14.94773	0.2207161	0.17190617	3.2033796	20	1 11.9	20.9
341772 2007 VB ₃₃₅	16.1	X	234.26780	230.53391	86.24488	8.61604	0.0688384	0.18481722	3.0523976	20	3 16.4	20.7
341773 2007 WZ ₁	16.3	X	76.06560	66.96461	64.45626	11.10442	0.1248072	0.18639126	3.0351886	20	4 30.1	20.4
341774 2007 WG ₃	16.0	X	144.38515	52.55021	357.11293	8.39783	0.0837002	0.18910425	3.0060891	20	3 28.3	20.5
341775 2007 WE ₇	16.4	X	125.38291	58.94191	341.31522	4.66337	0.1557194	0.18170034	3.0872056	20	3 5.8	21.0
341776 2007 WV ₇	15.7	X	165.47653	19.31019	34.68974	7.91977	0.1479122	0.19121399	2.9839367	20	4 28.2	20.5
341777 2007 WC ₈	16.0	X	87.76159	186.24040	258.60260	16.35862	0.1795297	0.19255201	3.1152532	20	3 15.5	20.7
341778 2007 WH ₈	16.3	X	53.25573	85.49704	35.65857	10.20030	0.1986743	0.17819614	3.1275470	20	3 23.8	20.0
341779 2007 WS ₂₃	16.4	X	152.29854	261.57513	155.16350	2.98390	0.1078049	0.19139927	2.9820107	20	4 18.1	21.0
341780 2007 WU ₂₄	16.6	X	171.45116	227.61189	143.64899	3.69783	0.0875910	0.18699770	3.0286229	20	3 12.6	21.1
341781 2007 WX ₃₀	15.7	X	93.55412	152.45754	282.34060	5.60129	0.1495455	0.17972889	3.1097403	20	3 8.6	20.1
341782 2007 WF ₃₇	16.2	X	142.04285	54.92662	345.53175	4.35869	0.2011672	0.18479330	3.0526609	20	3 25.0	21.1
341783 2007 WF ₃₇	15.9	X	162.24989	103.05236	280.53205	7.40963	0.1273564	0.18541987	3.0457800	20	3 15.6	20.8
341784 2007 WS ₄₁	16.4	X	179.98764	215.50767	197.65943	2.53632	0.0546989	0.19474916	2.9477161	20	5 10.3	20.8
341785 2007 WU ₄₂	16.2	X	125.65571	283.58646	93.74238	3.60972	0.1500853	0.17841279	3.1250146	20	2 8.9	20.9
341786 2007 WD ₄₅	15.5	X	41.29738	124.08382	339.39563	8.83224	0.0613787	0.17531591	3.1617085	20	1 27.9	19.7
341787 2007 WY ₄₇	15.8	X	222.45208	276.87425	29.60640	10.35490	0.0800251	0.18344494	3.0676011	20	2 20.4	20.6
341788 2007 WM ₄₈	15.6	X	264.67670	207.30957	85.58885	7.23313	0.0246423	0.18815414	3.0162004	20	3 26.2	19.9
341789 2007 WJ ₅₈	15.8	X	116.91349	12.37821	87.66375	10.42277	0.0862717	0.18783178	3.0196504	20	5 3.8	20.3
341790 2007 WU ₅₉	15.9	X	87.39148	44.01139	89.84467	11.34836	0.0269693	0.18881323	3.0091773	20	5 2.6	20.2
341791 2007 WM ₆₁	16.0	X	45.77890	220.31180	239.35870	9.12573	0.0779866	0.17363072	3.1821330	20	1 25.9	20.3
341792 2007 XN ₆	15.4	X	135.68915	116.96172	261.43189	16.47154	0.1470234	0.17785179	3.1315827	20	2 11.9	20.5
341793 2007 XL ₁₀	16.0	X	90.96956	248.52644	212.34710	7.34583	0.1226929	0.18243764	3.0788823	20	4 4.4	20.2
341794 2007 XV ₁₁	16.1	X	152.30097	270.13994	38.83434	8.29606	0.2946780	0.17460244	3.1703157	20	—	—
341795 2007 XF ₁₅	15.8	X	125.06654	75.49879	39.62146	9.61425	0.1921233	0.19156180	2.9803237	20	6 6.3	20.6
341796 2007 XD ₂₀	15.3	X	153.62379	59.90986	291.16841	10.29427	0.1104686	0.17797944	3.1300852	20	1 31.1	20.2
341797 2007 XK ₂₁	15.5	X	131.62368	112.68545	268.56091	8.63744	0.1168659	0.17826720	3.1267158	20	2 11.9	20.2
341798 2007 XU ₂₂	16.3	X	97.47349	171.86626	281.06707	2.53814	0.1886848	0.18181854	3.0858675	20	4 11.4	20.7
341799 2007 XF ₂₃	16.2	X	91.26434	286.59860	136.50776	1.99674	0.1691694	0.17753347	3.1353249	20	2 26.7	20.5
341800 2007 XP ₂₅	16.2	X	144.44847	235.48486	174.87495	0.81411	0.2045734	0.18601178	3.0393153	20	4 8.9	21.2
341801 2007 XQ ₂₇	16.1	X	97.42444	14.55273	74.72629	2.17920	0.1706090	0.17987722	3.1080304	20	4 6.7	20.5
341802 2007 XG ₂₉	16.4	X	188.98203	342.73489	55.90688	12.78619	0.0586272	0.19636574	2.9315158	20	5 3.4	20.7
341803 2007 XL ₃₂	16.8	X	20.24616	284.27596	292.88471	20.11823	0.0202737	0.34635681	2.0081072	20	5 4.7	19.4
341804 2007 XC ₃₅	15.9	X	172.43193	308.00366	59.50852	17.09194	0.0504728	0.18294520	3.0731850	20	3 16.5	20.8
341805 2007 XT ₃₅	15.9	X	152.84461	89.64478	268.60311	13.20108	0.2527202	0.18115924	3.0933500	20	2 13.5	21.3
341806 2007 XA ₃₇	15.8	X	189.77989	229.37717	281.61644	13.39871	0.1397142	0.21285681	2.7780775	20	9 12.2	20.5
341807 2007 XS ₄₁	15.4	X	100.62337	350.50380	81.74355	13.10422	0.2222838	0.17752286	3.1354499	20	4 2.5	20.3
341808 2007 XF ₄₃	16.2	X	104.43080	12.90060	75.11919	10.44649	0.0097206	0.18246019	3.0786289	20	3 26.8	20.7
341809 2007 XE ₄₄	16.8	X	112.51734	238.27079	221.93185	1.95750	0.2460221	0.18520889	3.0480926	20	5 13.7	21.5
341810 2007 XQ ₄₉	16.1	X	73.36748	132.33475	276.14176	1.93707	0.2157519	0.16649746	3.2723843	20	1 23.8	20.1
341811 2007 XS ₄₉	16.3	X	110.79567	168.39534	254.77435	0.63073	0.1182256	0.17542656	3.1603789	20	3 13.4	20.7
341812 2007 XB ₅₅	16.7	X	95.40645	58.59822	32.43994	1.80144	0.1528542	0.18063473	3.0993352	20	4 3.3	21.0
341813 2007 XH ₅₇	15.8	X	154.10696	200.23687	221.23786	7.94949	0.0514611	0.18808499	3.0169397	20	4 20.5	20.3
341814 2007 XR ₅₇	15.4	X	97.49247	337.33762	103.90065	11.35171	0.0975318	0.17593586	3.1542768	20	3 22.6	20.0
341815 2007 XY ₅₇	15.7	X	143.59738	122.59383	254.29823	8.60097	0.1031389	0.17812811	3.1283433	20	2 17.2	20.6
341816 2007 YK	17.5	X	345.18473	281.50282	132.83818	31.84429	0.3214361	0.38537988	1.8701511	20	—	—
341817 2007 YV ₂	16.6	X	46.30797	122.97180	11.25317	4.28869	0.0860617	0.17464391	3.1698138	20	3 13.7	20.5
341818 2007 YX ₁₆	15.7	X	72.73883	60.13526	77.80247	6.44959	0.1086053	0.18395574	3.0619199	20	4 28.4	19.8
341819 2007 YE ₃₂	15.5	X	192.27293	268.25380	74.30655	11.17877	0.0407061	0.18045628	3.1013781	20	3 4.3	20.2
341820 2007 YT ₅₁	15.8	X	105.25755	170.79028	256.58166	4.42926	0.0376372	0.17824525	3.1269726	20	2 27.9	20.3
341821 2007 YS ₅₂	16.2	X	86.07223	104.52482	343.56978	4.92540	0.1669186	0.17447412	3.1718700	20	3 20.6	20.6
341822 2007 YW ₆₅	16.6	X	116.74580	297.40619	117.30039	1.76271	0.2180304	0.17522603	3.1627896	20	3 22.5	21.4
341823 2007 YB ₆₉	16.4	X	97.97828	63.91114	30.10583	1.18856	0.1448169	0.17856835	3.1231994	20	4 8.9	20.9
341824 2008 AZ ₅	16.5	X	153.86966	325.40473	94.68169	3.86809	0.1411029	0.19240443	2.9716159	20	4 26.1	21.2
341825 2008 AE ₂₂	15.2	X	65.78684	259.07128	124.43389	11.08302	0.1047452	0.15033801	3.5028659	20	—	—
341826 Aurelbaier	15.8	X	122.04443	73.86844	315.63117	14.81112	0.2701088	0.17692546	3.1425039	20	2 27.5	21.0
341827 2008 AH ₈₇	16.4	X	103.27329	106.51444	298.41075	4.00550	0.2012831	0.17198932	3.2023471	20	2 22.5	21.0
341828 2008 BK ₂	16.0	X	117.80562	83.12171	354.00056	9.28662	0.2087778	0.17739044	3.1370101	20	4 14.4	20.9
341829 2008 BF ₃₉	15.3	X	141.03653	271.83218	107.39200	10.75138	0.1062975	0.16938446	3.2350948	20	2 25.3	20.3
341830 2008 CY ₅₃	14.6	X	170.22584	248.29075	293.24171	8.25463	0.1582924	0.12472939	3.9672555	20	9 24.3	21.0
341831 2008 CU ₆₄	14.9	X	98.34966	357.33736	248.74182	3.36796	0.0342498	0.12393133	3.9842689	20	9 23.9	20.6
341832 2008 CP ₇₂	17.7	X	177.41445	151.76116	353.63923	18.83462	0.0616384	0.36036923	1.9557090	20	9 21.2	19.7
341833 2008 CS ₈₉	16.5	X	96.31021	280.48253	153.73864	1.65261	0.1543843	0.17498803	3.1656567	20</		

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341841 2008 <i>DN</i> ₅₂	14.9	X	223.29062	315.58326	188.82445	9.24837	0.1656320	0.12515932	3.9581652	20	10 1.7	20.9
341842 2008 <i>DG</i> ₇₉	15.0	X	221.63544	99.64797	37.00267	7.76684	0.1306941	0.12595300	3.9415196	20	9 26.9	21.0
341843 2008 <i>EV</i> ₅	20.0	X	184.19760	234.94879	93.37502	7.43721	0.0833610	1.05083678	0.9581773	20	—	—
341844 2008 <i>EF</i> ₂₉	14.9	X	276.01674	343.18262	126.15504	3.82387	0.1580148	0.12577089	3.9453235	20	10 20.2	20.2
341845 2008 <i>EQ</i> ₃₉	13.5	X	283.34950	38.68726	260.45451	4.57145	0.2111604	0.08391239	5.1671608	20	4 1.1	20.4
341846 2008 <i>EV</i> ₅₅	15.7	X	44.86398	100.22537	328.24056	7.13975	0.1011329	0.15425105	3.4433721	20	—	—
341847 2008 <i>EC</i> ₁₂₁	17.7	X	187.05763	284.14638	17.86469	4.84906	0.1834218	0.30617157	2.1801823	20	—	—
341848 2008 <i>EV</i> ₁₄₇	17.7	X	176.69515	116.43300	156.47953	3.36308	0.2242009	0.29603324	2.2296793	20	—	—
341849 2008 <i>FT</i> ₂₀	17.9	X	183.30999	196.36940	111.26897	5.83048	0.2056585	0.30396998	2.1909677	20	—	—
341850 2008 <i>FM</i> ₂₁	17.9	X	144.84986	227.35136	79.98053	6.33255	0.1975606	0.29520348	2.2338554	20	—	—
341851 2008 <i>FC</i> ₃₀	18.3	X	208.40894	283.49827	339.48332	5.25078	0.1416092	0.30628250	2.1796559	20	—	—
341852 2008 <i>FQ</i> ₅₀	17.8	X	155.97136	144.07530	150.15523	5.21372	0.1752004	0.29471706	2.2363127	20	—	—
341853 2008 <i>FH</i> ₅₇	17.2	X	128.52485	267.76685	31.32330	6.71713	0.1472443	0.28911798	2.2650927	20	—	—
341854 2008 <i>FO</i> ₆₃	13.5	X	277.82455	256.38918	65.94702	10.14613	0.2311410	0.08399046	5.1639586	20	4 23.4	20.5
341855 2008 <i>FF</i> ₇₉	17.9	X	229.57142	102.13544	197.25637	4.27537	0.1213475	0.31589502	2.1352113	20	1 27.2	20.9
341856 2008 <i>FN</i> ₉₄	13.9	X	322.29815	89.93895	174.23090	8.00493	0.0591556	0.08355159	5.1820256	20	5 1.1	20.6
341857 2008 <i>FV</i> ₁₀₀	13.7	X	259.47657	230.60126	100.85256	8.45537	0.0683316	0.08380188	5.1717027	20	5 4.0	20.7
341858 2008 <i>FQ</i> ₁₁₂	17.8	X	164.52524	238.48656	80.71851	4.83612	0.2089144	0.30219966	2.1992439	20	—	—
341859 2008 <i>FW</i> ₁₁₂	18.0	X	149.11679	289.35804	44.89188	6.35360	0.1822066	0.30356268	2.1926558	20	—	—
341860 2008 <i>FM</i> ₁₁₇	17.9	X	185.53256	300.72891	22.05487	7.54947	0.0538123	0.30984703	2.1629069	20	1 10.1	20.7
341861 2008 <i>FA</i> ₁₁₈	13.4	X	283.55747	98.23309	214.73111	21.13966	0.1093268	0.08261813	5.2209852	20	5 2.2	20.2
341862 2008 <i>FC</i> ₁₂₄	17.7	X	197.41010	230.60791	67.48186	7.97932	0.1760875	0.30248582	2.1978567	20	—	—
341863 2008 <i>FB</i> ₁₂₆	12.9	X	294.14493	238.40843	63.40601	18.00823	0.0738432	0.08219037	5.2390848	20	5 8.8	19.8
341864 2008 <i>FE</i> ₁₃₀	17.6	X	173.00262	250.19910	49.68561	6.92002	0.1922197	0.29838374	2.2179544	20	—	—
341865 2008 <i>FA</i> ₁₃₂	13.6	X	233.27778	307.57657	45.85570	5.30319	0.0908059	0.08417607	5.1563646	20	4 26.8	20.7
341866 2008 <i>FS</i> ₁₃₂	18.1	X	265.65098	24.34142	188.14933	4.94760	0.0929863	0.30453407	2.1879906	20	—	—
341867 2008 <i>FL</i> ₁₃₄	13.8	X	257.02410	131.89807	211.42802	24.09277	0.0801632	0.08299032	5.2053637	20	5 11.1	20.8
341868 2008 <i>GU</i> ₁	17.4	X	137.52974	280.84451	351.21864	3.28816	0.1991862	0.28463805	2.2887977	20	—	—
341869 2008 <i>GW</i> ₆	13.3	X	315.59140	233.11356	48.34479	9.60413	0.1299173	0.08374909	5.1738756	20	5 3.3	19.7
341870 2008 <i>GS</i> ₃₁	12.9	X	304.91046	238.79712	52.21220	22.40828	0.0883643	0.08476628	5.1324017	20	5 6.6	19.5
341871 2008 <i>GH</i> ₃₈	18.5	X	284.23903	10.71914	183.80969	4.38991	0.0951721	0.30298210	2.1954560	20	—	—
341872 2008 <i>GW</i> ₄₄	13.9	X	291.44458	81.95569	221.90048	23.14794	0.1249164	0.08224250	5.2368708	20	4 28.4	20.7
341873 2008 <i>GT</i> ₄₅	17.4	X	163.82342	220.39734	84.07199	7.56911	0.2501155	0.29455170	2.2371496	20	—	—
341874 2008 <i>GB</i> ₅₃	18.0	X	128.62234	225.28506	130.84188	3.70685	0.1665733	0.30602298	2.1808880	20	—	—
341875 2008 <i>GX</i> ₅₆	13.7	X	315.81695	222.59789	40.63900	6.41958	0.1040976	0.08335705	5.1900851	20	4 16.2	20.2
341876 2008 <i>GW</i> ₇₇	18.2	X	169.81149	238.94750	89.22816	5.25396	0.1847740	0.30344478	2.1932237	20	1 11.2	21.4
341877 2008 <i>GA</i> ₇₈	13.9	X	283.58063	188.17150	126.19887	6.75631	0.1229994	0.08225930	5.2361576	20	5 4.1	20.8
341878 2008 <i>GL</i> ₈₆	17.9	X	179.40722	278.43731	19.32253	8.42639	0.2110864	0.30111614	2.2045653	20	—	—
341879 2008 <i>GT</i> ₈₆	17.5	X	182.06643	178.95040	110.16840	4.60669	0.2191714	0.29946455	2.2126146	20	—	—
341880 2008 <i>GT</i> ₈₇	13.1	X	286.17219	278.83660	23.01225	35.80802	0.1383828	0.08393064	5.1664115	20	4 15.9	19.9
341881 2008 <i>GM</i> ₉₄	13.7	X	270.38497	197.04839	114.43423	6.89428	0.0477344	0.08401347	5.1630155	20	4 25.9	20.6
341882 2008 <i>GA</i> ₁₀₁	17.5	X	138.91881	317.23214	39.50030	6.70967	0.0879409	0.30560520	2.1828751	20	—	—
341883 2008 <i>GS</i> ₁₀₄	15.0	X	278.46495	288.24042	173.79066	9.28808	0.1788273	0.12508944	3.9596393	20	10 11.5	20.3
341884 2008 <i>GA</i> ₁₂₀	18.0	X	133.35767	104.18828	162.93242	2.39762	0.2224601	0.28292802	2.2980109	20	12 26.9	22.0
341885 2008 <i>GB</i> ₁₃₁	18.5	X	170.98138	85.38590	187.56257	4.96286	0.1500340	0.29149200	2.2527775	20	—	—
341886 2008 <i>GG</i> ₁₃₂	13.7	X	325.05769	163.68155	97.07321	6.81703	0.0742879	0.08086422	5.2962089	20	4 30.0	20.5
341887 2008 <i>GM</i> ₁₃₃	18.1	X	260.69397	193.01836	70.28759	2.73363	0.1053600	0.31114847	2.1568715	20	1 16.3	20.9
341888 2008 <i>GT</i> ₁₄₃	14.0	X	208.43576	233.59389	144.18286	13.21569	0.0292983	0.07985989	5.3405205	20	5 6.8	21.3
341889 2008 <i>HF</i>	16.9	X	248.35296	43.12844	62.91797	23.00319	0.1003459	0.37250248	1.9130072	20	11 11.4	18.4
341890 2008 <i>HK</i> ₁₂	17.0	X	179.24382	137.12316	46.69381	7.12211	0.0398106	0.27600596	2.3362738	20	11 6.4	20.1
341891 2008 <i>HK</i> ₁₈	14.0	X	272.37568	205.95206	124.56434	10.52481	0.0912731	0.08347375	5.1852466	20	5 14.6	21.0
341892 2008 <i>HM</i> ₂₀	13.7	X	325.71875	52.20369	211.17689	12.56480	0.0119670	0.08511656	5.1183109	20	5 7.3	20.5
341893 2008 <i>HF</i> ₂₁	18.3	X	147.92975	157.46042	141.40804	3.23806	0.1496203	0.29024297	2.2592359	20	—	—
341894 2008 <i>HR</i> ₂₁	13.5	X	316.53804	238.04152	52.78199	12.16554	0.0936267	0.08286820	5.2104764	20	5 18.6	20.1
341895 2008 <i>HW</i> ₂₁	17.8	X	136.79851	81.63074	213.56213	3.73712	0.1758998	0.28711367	2.2756221	20	—	—
341896 2008 <i>HR</i> ₃₆	17.3	X	83.08875	214.81406	96.57742	8.09495	0.2037891	0.27710391	2.3300985	20	—	—
341897 2008 <i>HJ</i> ₄₃	14.1	X	299.12081	105.74657	184.77998	3.55593	0.0601629	0.08352766	5.1830157	20	5 1.7	20.8
341898 2008 <i>HJ</i> ₅₁	18.0	X	94.36537	106.36521	215.15201	5.29841	0.2103525	0.28199464	2.3030789	20	—	—
341899 2008 <i>HK</i> ₅₃	17.5	X	179.59961	198.81549	96.06788	9.50056	0.1644992	0.29704224	2.2246272	20	—	—
341900 2008 <i>HE</i> ₅₄	13.5	X	321.63386	223.84251	66.51741	13.68902	0.0430397	0.08402342	5.1626081	20	5 29.8	20.2
341901 2008 <i>HN</i> ₅₅	17.8	X	72.38740	71.01927	222.25281	12.89971	0.2896162	0.2695980	2.3733728	20	12 11.9	21.9
341902 2008 <i>HX</i> ₅₉	17.7	X	81.96394	147.72737	156.59877	3.77120	0.2529248	0.28179429	2.3041704	20	—	—
341903 2008 <i>HP</i> ₆₁	17.7	X	185.14935	37.64392	234.39460	2.61942	0.1613493	0.29407076	2.2395881	20	—	—
341904 2008 <i>HJ</i> ₇₀	17.7	X	249.75133	262.20073	23.44821	2.45408	0.0952727	0.31347144	2.1462027	20	2 3.6	20.4
341905 2008 <i>HQ</i> ₆	17.7	X	208.08204	42.62345	196.38950	6.96219	0.0878189	0.29352468	2.2423650	20	—	—
341906 2008 <i>JC</i> ₈	16.7	X	136.60953	90.47303	190.26152	23.84294	0.1668340	0.28604483	2.2812873	20	—	—
341907 2008 <i>JF</i> ₁₀	17.6	X	133.01856	109.65440	222.37216	6.87918	0.1973378	0.29306067	2.2447313	20	—	—
341908 2008 <i>JV</i> ₁₃	17.3	X	134.22401	161.11991	109.54465	5.37893	0.1784656	0.28055061	2.3109749	20	—	—
341909 2008 <i>JU</i> ₁₆	13.8	X	37.44247	8.77517	186.23881	9.59019	0.0093299	0.08239210	5.2305298	20	5 13.6	20.7
341910 2008 <i>JU</i> ₂₀	17.6	X	191.42883	251.00433	54.93666	7.62701	0.2169227	0.29945542	2.2126596	20	1 5.9	21.2
341911 2008 <i>JB</i> ₂₉	16.9	X	130.25385	263.06838	44.05973	21.61102	0.2485669	0.28690953	2.2767014	20	—	—
341912 2008 <i>JA</i> ₃₂	16.9	X	88.15206	266.65776	77.87895	3.78153	0.1959227	0.28461640	2.2889138	20	—	—
341913 2008 <i>JZ</i> _{32</}												

ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
341921 2008 <i>KB</i> ₂₀	17.4	X	161.99165	148.69624	121.11873	3.64604	0.1447267	0.28830183	2.2693655	20	—	—
341922 2008 <i>KH</i> ₃₅	13.9	X	255.72891	142.05800	202.69309	7.74966	0.0801000	0.08006123	5.3315629	20	5 11.7	21.0
341923 2008 <i>KZ</i> ₃₇	13.3	X	296.78286	106.59677	214.63006	28.32780	0.0613022	0.08370352	5.1757533	20	5 31.9	20.2
341924 2008 <i>KL</i> ₄₀	17.8	X	162.74782	101.92785	195.01495	5.93868	0.2033604	0.29076739	2.2565186	20	—	—
341925 2008 <i>KD</i> ₄₃	13.2	X	230.25521	240.02798	134.21267	10.66701	0.0386860	0.08050796	5.3118221	20	5 23.9	20.4
341926 2008 <i>LW</i>	14.4	X	265.88253	122.79063	202.29295	10.87198	0.1146207	0.08185169	5.2535269	20	4 26.1	21.4
341927 2008 <i>LF</i> ₅	17.1	X	82.09891	175.42466	110.49404	7.20254	0.2379990	0.26652959	2.3913277	20	12 7.8	21.0
341928 2008 <i>LC</i> ₅	12.9	X	196.44798	326.74310	79.72337	28.42184	0.1134868	0.08337644	5.1892808	20	5 24.4	20.3
341929 2008 <i>MZ</i> ₄	17.2	X	79.17035	161.18768	121.56360	6.03374	0.2948547	0.26483598	2.4015118	20	12 5.3	21.4
341930 2008 <i>NR</i> ₂	16.9	X	65.43059	359.31002	302.99516	4.20420	0.1746873	0.26336465	2.4104478	20	12 5.4	20.5
341931 2008 <i>NH</i> ₃	17.2	X	170.40537	28.62456	251.03767	3.97455	0.1651094	0.28447587	2.2896675	20	—	—
341932 2008 <i>OU</i>	17.2	X	44.73413	32.00672	294.45734	4.82732	0.1635821	0.26366228	2.4086335	20	12 12.4	20.4
341933 2008 <i>OZ</i> ₂	17.5	X	168.90638	298.17395	343.97258	2.90665	0.1500950	0.28398648	2.2922973	20	—	—
341934 2008 <i>OK</i> ₇	17.0	X	148.73299	337.98949	295.91522	8.26368	0.1252312	0.27749943	2.3278839	20	—	—
341935 2008 <i>OR</i> ₈	17.4	X	90.59151	98.55478	211.65718	4.82738	0.1564783	0.27003164	2.3706073	20	—	—
341936 2008 <i>OD</i> ₉	17.2	X	31.50786	255.89727	79.26850	2.49124	0.2034014	0.26077602	2.4263733	20	12 12.8	20.3
341937 2008 <i>OG</i> ₉	17.8	X	63.30827	123.95916	223.42167	1.49556	0.2495771	0.26960195	2.3731254	20	—	—
341938 2008 <i>OT</i> ₁₀	17.4	X	8.27242	27.47007	353.38840	3.47582	0.2198975	0.26157656	2.4214203	20	—	—
341939 2008 <i>OE</i> ₁₄	17.1	X	77.84933	131.72843	154.74695	5.19390	0.2151426	0.26432984	2.4045765	20	12 2.9	20.9
341940 2008 <i>OB</i> ₁₈	17.2	X	98.27418	333.38779	325.71641	5.59602	0.1237274	0.26762520	2.3849768	20	12 31.9	20.8
341941 2008 <i>OK</i> ₂₄	17.2	X	63.04427	41.55806	267.26894	11.28644	0.2056411	0.26227908	2.4170944	20	12 14.5	20.9
341942 2008 <i>OV</i> ₂₄	17.0	X	26.00053	3.59332	2.35306	2.10405	0.2254252	0.26339949	2.4102352	20	—	—
341943 2008 <i>OG</i> ₂₅	16.7	X	99.80786	36.10866	272.80727	7.88713	0.2586055	0.27166995	2.3610670	20	—	—
341944 2008 <i>PC</i>	17.0	X	101.11990	328.17934	300.30088	6.28227	0.1288546	0.27087918	2.3656598	20	—	—
341945 2008 <i>PE</i>	17.1	X	16.08841	229.00177	131.21352	3.42167	0.1283078	0.25553513	2.4594366	20	11 15.4	19.8
341946 2008 <i>PW</i>	16.7	X	19.04498	109.25867	226.12292	5.93506	0.1390797	0.25767554	2.4457980	20	11 15.3	19.5
341947 2008 <i>PC</i> ₁	17.1	X	116.18327	136.11512	137.12395	10.31142	0.2192284	0.27202051	2.3590381	20	12 19.9	21.2
341948 2008 <i>PH</i> ₂	16.9	X	71.54884	3.62742	295.01534	13.43622	0.0200731	0.26471365	2.4022516	20	11 17.4	20.2
341949 2008 <i>PD</i> ₃	17.7	X	88.06986	27.38444	304.40699	0.62869	0.2008676	0.27144091	2.3623950	20	—	—
341950 2008 <i>PT</i> ₄	17.4	X	29.86003	274.50603	45.12995	5.43769	0.2162598	0.25721466	2.4487187	20	11 20.9	20.3
341951 2008 <i>PK</i> ₅	16.7	X	17.93804	175.92719	188.89329	6.16309	0.1559267	0.26129737	2.4231447	20	12 26.7	19.8
341952 2008 <i>PY</i> ₁₁	17.6	X	46.99997	67.80455	271.23292	1.77032	0.2206460	0.26362998	2.4088302	20	—	—
341953 2008 <i>PU</i> ₁₅	18.1	X	84.87169	339.77846	328.47954	2.08473	0.2049954	0.26665939	2.3905516	20	—	—
341954 2008 <i>PS</i> ₁₉	18.1	X	30.88114	84.69350	294.75360	0.47754	0.1990607	0.26524444	2.3990457	20	—	—
341955 2008 <i>PH</i> ₂₀	16.8	X	5.98124	292.55077	134.01822	22.20416	0.1059979	0.27115579	2.3640507	20	—	—
341956 2008 <i>PQ</i> ₂₀	16.8	X	0.33748	285.84248	74.17512	9.52672	0.1854090	0.25564505	2.4587316	20	11 26.8	19.3
341957 2008 <i>PV</i> ₂₀	16.9	X	340.21036	318.36304	54.19108	7.07625	0.2165237	0.25184038	2.4834332	20	11 7.4	18.6
341958 2008 <i>Chrétien</i>	16.9	X	58.93266	8.91395	299.14404	4.12360	0.1886676	0.26165626	2.4209285	20	12 7.2	20.3
341959 2008 <i>QM</i>	17.8	X	104.11046	151.27382	132.23145	2.08761	0.1785957	0.26705737	2.3881760	20	12 19.8	21.5
341960 2008 <i>QJ</i> ₁	17.2	X	40.89224	316.85421	34.23109	2.24569	0.2064461	0.26317001	2.4116361	20	—	—
341961 2008 <i>QL</i> ₁	17.4	X	31.10432	289.72511	75.80070	2.27270	0.1965602	0.26300293	2.4126574	20	—	—
341962 2008 <i>QU</i> ₁	17.0	X	289.81441	45.04474	330.40588	13.11352	0.2010059	0.23984596	2.5655537	20	7 20.0	20.0
341963 2008 <i>QX</i> ₁	17.4	X	61.36412	146.96972	184.05590	5.64833	0.1643810	0.26359111	2.4090670	20	—	—
341964 2008 <i>QU</i> ₆	17.7	X	112.69928	58.15011	215.42574	1.18203	0.2017410	0.26684836	2.3894229	20	12 15.7	21.7
341965 2008 <i>QV</i> ₆	16.8	X	20.51079	5.65109	338.86784	5.87455	0.1308116	0.25673350	2.4517773	20	11 26.7	19.9
341966 2008 <i>QS</i> ₁₀	17.6	X	359.71258	197.48026	189.42488	1.08543	0.2145878	0.25766315	2.4458764	20	—	—
341967 2008 <i>QW</i> ₁₃	17.8	X	289.75983	81.51958	320.40124	7.15351	0.1912784	0.24492547	2.5299586	20	8 26.1	20.5
341968 2008 <i>QH</i> ₁₄	17.1	X	124.34439	316.08492	324.28436	3.48534	0.1428921	0.26952638	2.3735690	20	—	—
341969 2008 <i>QT</i> ₁₅	17.3	X	36.53796	171.18903	194.59785	2.38538	0.1938236	0.26287027	2.4134691	20	—	—
341970 2008 <i>QA</i> ₁₆	17.3	X	358.74361	78.04820	327.34946	1.72714	0.1865530	0.26171478	2.4205676	20	—	—
341971 2008 <i>QN</i> ₁₇	16.8	X	143.39469	301.12834	346.44499	5.80172	0.1001817	0.27187625	2.3598725	20	—	—
341972 2008 <i>QO</i> ₂₀	16.0	X	326.68447	306.03651	333.73688	12.38873	0.2403181	0.23035313	2.6355624	20	4 18.5	19.1
341973 2008 <i>QO</i> ₂₆	17.1	X	15.56296	245.60818	76.97044	2.00346	0.1856535	0.25334599	2.4735842	20	10 29.9	19.6
341974 2008 <i>QZ</i> ₃₀	17.2	X	27.67808	124.87919	228.47242	5.63912	0.1118336	0.25968153	2.4331862	20	12 17.7	20.2
341975 2008 <i>QV</i> ₃₆	18.2	X	330.74474	251.62135	182.55391	4.25452	0.2072814	0.26081135	2.4261542	20	—	—
341976 2008 <i>QD</i> ₃₇	17.5	X	99.81513	98.01431	190.36490	2.16043	0.1699279	0.26540785	2.3980609	20	12 21.2	21.2
341977 2008 <i>QC</i> ₃₈	17.5	X	307.26601	202.54686	164.61514	13.44554	0.1637281	0.24133526	2.5549880	20	8 9.7	20.2
341978 2008 <i>QU</i> ₃₈	16.6	X	338.37720	311.96416	334.31086	13.17331	0.1588872	0.23480964	2.6021087	20	6 9.4	19.6
341979 2008 <i>QF</i> ₃₉	16.4	X	132.35372	337.80230	211.77672	4.29100	0.1377748	0.24307865	2.5427569	20	9 14.4	20.4
341980 2008 <i>QZ</i> ₃₉	17.2	X	315.02490	242.80021	163.22240	6.34075	0.1427960	0.25301095	2.4757674	20	11 2.2	19.5
341981 2008 <i>QF</i> ₄₀	17.5	X	24.38571	64.93118	332.99199	2.12917	0.1914785	0.26501721	2.4004169	20	—	—
341982 2008 <i>QR</i> ₄₀	17.4	X	267.04590	163.35626	188.24445	3.42692	0.1044382	0.22855614	2.6493588	20	5 27.7	21.0
341983 2008 <i>QV</i> ₄₀	16.0	X	70.62114	24.77642	184.73052	13.25178	0.2552498	0.23554526	2.5966882	20	8 17.4	19.9
341984 2008 <i>QP</i> ₄₄	17.3	X	0.96503	260.85935	132.81295	1.68261	0.1767343	0.25869235	2.4393849	20	—	—
341985 2008 <i>QT</i> ₄₅	16.9	X	26.52064	168.19647	168.47629	7.24353	0.1620220	0.25747779	2.4470501	20	12 2.5	20.0
341986 2008 <i>QS</i> ₄₆	17.1	X	67.60289	51.11948	248.77866	5.59943	0.1410178	0.25932122	2.4354395	20	11 30.6	20.5
341987 2008 <i>QG</i> ₄₇	17.3	X	358.87981	263.22318	56.54884	1.61101	0.1573235	0.24795158	2.5093321	20	9 19.3	19.5
341988 2008 <i>QH</i> ₄₇	17.3	X	316.66205	265.91348	196.70359	8.89117	0.1811571	0.26125906	2.4233816	20	—	—
341989 2008 <i>RL</i> ₂	17.0	X	263.14462	85.45595	343.17131	12.32024	0.0713311	0.24486601	2.5303682	20	9 10.9	20.1
341990 2008 <i>RT</i> ₂	17.0	X	92.81876	309.71982	342.71993	8.45796	0.2087771	0.26410387	2.4059479	20	12 21.9	21.1
341991 2008 <i>RB</i> ₄	17.1	X	179.98700	260.70949	305.55999	1.81429	0.1289129	0.26089635	2.4256271	20	11 24.9	20.7
341992 2008 <i>RE</i> ₉	17.6	X	350.77976	295.74709	7.27174	14.74647	0.2583639	0.24192849	2.5508096	20	8 17.8	19.6
341993 2008 <i>RP</i> ₁₀	17.3											

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342001 2008 RJ ₃₄	16.9	X	244.10579	307.11267	197.19097	5.07183	0.0970473	0.25815570	2.4427643	20	11 26.6	20.0
342002 2008 RO ₃₄	17.8	X	332.36980	150.51053	279.23898	1.46476	0.1950880	0.25833716	2.4416203	20	—	—
342003 2008 RV ₃₄	17.0	X	298.62185	307.26614	190.38507	7.17462	0.1715144	0.26727456	2.3868821	20	—	—
342004 2008 RL ₃₅	17.9	X	44.39788	31.68136	309.41882	0.89337	0.1947629	0.26031015	2.4292673	20	—	—
342005 2008 RS ₃₅	16.5	X	205.83194	147.36281	347.57601	5.20184	0.0402904	0.24736850	2.5132737	20	9 29.2	19.7
342006 2008 RS ₃₆	17.0	X	155.84553	234.82754	345.10326	5.20066	0.0872564	0.25867733	2.4394793	20	11 17.7	20.5
342007 2008 RQ ₄₂	17.4	X	307.81510	256.24168	95.04913	1.01318	0.2231573	0.23870923	2.5736920	20	7 9.3	20.0
342008 2008 RY ₄₆	17.7	X	256.02017	151.75855	252.38665	0.43707	0.1190970	0.23448554	2.6045059	20	7 21.3	21.0
342009 2008 RJ ₄₇	17.4	X	57.32875	157.20515	159.93908	2.63103	0.2396140	0.26310478	2.4120347	20	12 22.7	21.1
342010 2008 RX ₅₆	16.3	X	109.94260	219.39533	335.62394	5.51975	0.1537926	0.24176775	2.5519401	20	8 31.9	20.1
342011 2008 RK ₆₃	16.6	X	75.89853	228.95392	1.42866	15.11631	0.0591608	0.24223687	2.5486442	20	9 1.2	20.0
342012 2008 RL ₆₅	17.3	X	36.49803	322.26641	0.44438	13.16802	0.2258400	0.25652147	2.4531281	20	12 1.9	20.9
342013 2008 RX ₆₉	17.2	X	58.39072	96.13953	245.42628	2.46598	0.1834831	0.26509904	2.3999228	20	—	—
342014 2008 RM ₇₂	17.1	X	16.45813	210.76635	165.57701	6.65141	0.1215239	0.26262155	2.4149926	20	—	—
342015 2008 RQ ₇₄	17.6	X	35.55446	314.46666	21.62271	2.95895	0.1879407	0.25838781	2.4413012	20	12 15.9	20.9
342016 2008 RN ₇₈	15.7	X	291.84843	236.21970	115.54898	32.18480	0.2624240	0.23190468	2.6237938	20	6 13.1	19.5
342017 2008 Ramonin	17.3	X	74.17290	302.52465	36.95641	3.07806	0.1859944	0.26853416	2.3794122	20	—	—
342018 2008 RY ₈₀	16.3	X	285.02433	155.61168	246.66562	5.63089	0.3296956	0.23376999	2.6098179	20	7 23.0	19.5
342019 2008 RG ₈₄	17.8	X	331.72080	79.25109	305.29930	2.93101	0.1368309	0.25302489	2.4756764	20	10 30.5	20.1
342020 2008 RM ₈₈	17.1	X	3.51611	334.86495	313.78712	6.43867	0.2057087	0.24046311	2.5611622	20	8 13.6	19.2
342021 2008 RM ₉₃	17.5	X	56.96439	313.20860	9.09821	2.73330	0.1711949	0.25977465	2.4326047	20	12 20.9	20.9
342022 2008 RK ₉₅	16.9	X	3.47486	132.14185	227.74505	4.27050	0.1201058	0.25626738	2.4547494	20	11 21.8	19.5
342023 2008 RO ₉₆	16.9	X	186.85072	117.25044	2.87169	5.45639	0.0224159	0.23615669	2.5922043	20	8 18.9	20.5
342024 2008 RH ₉₈	17.1	X	77.38394	129.26956	183.44462	3.25235	0.2446585	0.26496925	2.4007065	20	—	—
342025 2008 RM ₉₉	18.0	X	264.33696	83.91058	356.64331	1.80914	0.1485957	0.24487570	2.5303014	20	9 17.8	21.2
342026 2008 RY ₉₉	17.1	X	237.57040	280.73528	160.26238	5.61295	0.2543614	0.23559763	2.5963034	20	7 30.8	21.1
342027 2008 RV ₁₀₀	16.9	X	255.40350	259.99659	174.54938	11.35296	0.0652980	0.24432067	2.5341320	20	9 9.3	20.0
342028 2008 RJ ₁₀₁	17.2	X	180.84910	270.95005	186.82404	3.15039	0.1526514	0.22663475	2.6643118	20	7 6.1	21.5
342029 2008 RH ₁₀₃	17.1	X	80.55172	74.37646	236.15302	4.40046	0.0997997	0.26262645	2.4149626	20	12 24.7	20.6
342030 2008 RE ₁₀₆	16.2	X	280.85523	332.88477	25.01281	12.21745	0.2517097	0.23098111	2.6307833	20	5 27.7	20.0
342031 2008 RA ₁₀₈	16.1	X	269.84490	71.97313	332.74256	14.12339	0.1544893	0.23600350	2.5933258	20	8 7.3	19.5
342032 2008 RT ₁₁₀	17.7	X	52.11314	174.07151	124.40981	2.52574	0.2271586	0.25473360	2.4645931	20	11 22.1	21.2
342033 2008 RM ₁₁₁	16.7	X	233.05810	97.68904	275.23238	2.87626	0.1894025	0.22401772	2.6850217	20	5 6.6	21.0
342034 2008 RF ₁₁₂	18.0	X	60.35762	39.28847	255.11464	1.82410	0.1856328	0.25441576	2.4666453	20	11 19.9	21.4
342035 2008 RM ₁₁₃	16.9	X	191.70203	188.12330	349.22619	5.61937	0.0749092	0.25582599	2.4575721	20	11 3.3	20.4
342036 2008 RB ₁₁₄	17.4	X	1.56235	55.23466	352.35792	6.37927	0.1345733	0.26364139	2.4087607	20	—	—
342037 2008 RT ₁₁₄	16.5	X	27.48761	235.96431	24.87173	11.39492	0.1908482	0.23501894	2.6005636	20	8 24.5	19.5
342038 2008 RG ₁₁₅	16.0	X	282.86194	325.72467	43.12872	6.46637	0.2100343	0.23119928	2.6291280	20	6 24.5	19.4
342039 2008 RP ₁₁₆	17.2	X	341.30364	305.06259	34.20892	4.98770	0.2919486	0.24116358	2.5562004	20	9 18.7	18.5
342040 2008 RT ₁₁₆	16.4	X	257.50021	264.13572	215.54627	3.74857	0.2354409	0.24138973	2.5546036	20	10 16.4	19.7
342041 2008 RJ ₁₁₇	16.5	X	318.96387	19.69329	291.21883	12.41581	0.1846707	0.23296312	2.6158405	20	6 5.1	19.4
342042 2008 RT ₁₁₈	17.2	X	243.25837	37.72214	34.23528	2.61099	0.0932161	0.23053989	2.6341388	20	8 16.4	20.8
342043 2008 RE ₁₁₉	16.4	X	86.60686	205.94208	14.08395	12.70586	0.1098726	0.23975480	2.5662040	20	9 7.7	20.1
342044 2008 RW ₁₂₀	16.6	X	261.14060	183.92302	179.14398	16.67041	0.1223326	0.22676474	2.6632935	20	6 3.2	20.7
342045 2008 RD ₁₂₁	17.8	X	265.29209	72.29494	345.97308	1.31417	0.1260584	0.24098839	2.5574309	20	8 22.3	20.9
342046 2008 RO ₁₂₅	16.3	X	303.50437	181.87182	159.41041	15.19472	0.1042137	0.23783363	2.5800049	20	7 4.9	19.7
342047 2008 RG ₁₃₀	16.4	X	224.35280	201.10981	222.19408	11.74206	0.1553827	0.22420647	2.6835145	20	7 3.0	20.7
342048 2008 RX ₁₃₀	17.6	X	80.64800	207.98521	99.43494	2.56733	0.1600781	0.26210021	2.4181940	20	12 25.6	21.3
342049 2008 RN ₁₃₁	17.4	X	69.06292	205.37428	98.22920	2.33457	0.1792328	0.25941338	2.4348627	20	12 10.8	20.9
342050 2008 RY ₁₃₄	18.0	X	80.97863	132.46748	166.36881	3.06168	0.2036279	0.26208459	2.4182901	20	12 18.7	21.8
342051 2008 RL ₁₃₅	16.8	X	244.66517	68.33869	310.33932	3.66615	0.0432713	0.23062636	2.6334804	20	6 12.4	20.3
342052 2008 RD ₁₄₀	17.1	X	250.07803	81.79956	136.93755	4.73613	0.1088964	0.28098260	2.3086057	20	—	—
342053 2008 RO ₁₄₄	17.0	X	114.15789	310.34350	332.69628	6.22670	0.0941200	0.26467574	2.4024810	20	12 26.3	20.6
342054 2008 RJ ₁₄₅	18.1	X	317.45825	271.79605	180.61851	2.07331	0.1815161	0.26009125	2.4306302	20	—	—
342055 2008 RV ₁₄₆	15.7	X	287.32793	39.12667	10.36935	22.24664	0.1501639	0.23839648	2.5759424	20	9 16.1	18.8
342056 2008 RX ₁₄₆	16.9	X	213.76367	33.40781	62.54628	4.00935	0.1277391	0.22598369	2.6694266	20	8 9.1	20.9
342057 2008 SE ₂	17.3	X	40.18325	115.88403	252.95467	1.40166	0.1997721	0.26335370	2.4105146	20	—	—
342058 2008 SM ₅	16.8	X	35.54536	309.59762	55.20611	6.11744	0.2001860	0.26113752	2.4241335	20	—	—
342059 2008 SM ₉	16.5	X	92.34763	350.48100	351.02364	7.43075	0.1308717	0.27213904	2.3583530	20	—	—
342060 2008 SW ₉	16.9	X	5.42309	235.23039	185.38669	6.59075	0.1207573	0.26665130	2.3906000	20	—	—
342061 2008 ST ₁₃	18.4	X	117.97129	331.93037	320.02783	1.90007	0.1952247	0.27277008	2.3547144	20	—	—
342062 2008 SK ₁₇	17.4	X	56.54946	147.65053	190.40297	4.58628	0.0773772	0.26527975	2.3988328	20	12 30.2	20.6
342063 2008 SY ₁₉	17.5	X	337.84912	191.78696	310.44448	5.39090	0.1018668	0.28345537	2.2951598	20	—	—
342064 2008 SW ₂₁	17.4	X	2.18798	222.70817	154.24087	2.99375	0.2113210	0.25781126	2.4449396	20	12 28.0	19.9
342065 2008 SG ₂₂	17.9	X	89.34070	35.55792	245.73492	1.80516	0.1681388	0.26229503	2.4169964	20	12 2.4	21.6
342066 2008 SJ ₂₂	17.5	X	206.47003	278.34047	295.84405	2.47063	0.0893433	0.27203417	2.3589591	20	—	—
342067 2008 SD ₂₄	17.7	X	300.65221	262.59138	171.17852	1.17470	0.1993659	0.25292054	2.4763574	20	11 8.3	19.5
342068 2008 SL ₂₄	18.0	X	5.87598	29.14899	358.51984	1.70308	0.2019077	0.25951020	2.4342570	20	—	—
342069 2008 SE ₂₆	17.2	X	167.63279	115.91811	162.64838	6.70265	0.1169970	0.27537536	2.3398391	20	—	—
342070 2008 SK ₂₉	17.1	X	255.58194	85.55670	335.66472	3.68555	0.1638906	0.23710196	2.5853100	20	8 7.2	20.6
342071 2008 SU ₂₉	16.7	X	17.76046	277.25344	3.80304	14.36312	0.1480168	0.23982325	2.5657157	20	8 30.0	19.6
342072 2008 SM ₃₁	16.6	X	341.26215	150.74071	249.68326	6.31384	0.0285911	0.25519278	2.4616358	20	12 2.7	19.6
342073 2008 SN ₃₂	17.1	X	113.41293	320.80927	305.75385	5.50035	0.1043079	0.25833545	2.4416311	20	12 2.9	20.8
342074 2008 SX ₃₃	17.0	X	113.01778	309.91185	350.07820							

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342081 2008 SU ₄₀	17.5	X	33.48244	342.42704	359.88996	1.85507	0.2321420	0.25893405	2.4378666	20	12 28.0	20.7
342082 2008 SY ₄₀	17.4	X	347.17210	22.89398	15.06281	3.10810	0.1963967	0.25657466	2.4527891	20	12 29.3	19.7
342083 2008 SR ₄₂	16.7	X	305.85191	172.65009	197.45139	21.93215	0.0205641	0.23869936	2.5737629	20	8 24.5	20.4
342084 2008 ST ₄₃	16.9	X	220.08831	97.95922	7.21246	2.70765	0.0463914	0.23920325	2.5701472	20	9 7.3	20.4
342085 2008 SC ₄₄	17.0	X	223.82704	252.33340	198.95656	10.96605	0.1648045	0.23388040	2.6089965	20	8 5.9	21.2
342086 2008 SJ ₄₅	17.2	X	308.90387	304.85724	22.75556	4.79432	0.1220902	0.23180404	2.6245532	20	6 21.4	20.2
342087 2008 SR ₄₅	17.2	X	329.20652	266.19794	184.77559	2.37696	0.0579734	0.26164266	2.4210124	20	—	—
342088 2008 SQ ₄₆	17.0	X	248.07733	15.53041	42.51019	3.62071	0.1172958	0.23388826	2.6089381	20	7 31.6	20.5
342089 2008 SK ₄₈	17.3	X	267.55077	315.36328	212.23669	2.04048	0.1266611	0.26813945	2.3817467	20	—	—
342090 2008 SE ₅₃	17.1	X	226.24109	349.83672	186.86878	1.94835	0.1323647	0.25925506	2.4358538	20	12 9.8	20.1
342091 2008 SO ₅₃	16.9	X	243.15564	220.60157	188.27974	13.54413	0.2567167	0.23059538	2.6337162	20	6 24.7	21.4
342092 2008 SL ₅₄	18.2	X	332.86533	350.70429	9.86763	4.01537	0.2218849	0.24521513	2.5279659	20	9 26.9	20.0
342093 2008 SL ₅₅	17.2	X	41.11994	252.96265	7.88644	3.46706	0.0970266	0.23849453	2.5752364	20	8 27.3	20.3
342094 2008 SD ₅₆	16.5	X	12.96405	270.15628	19.79080	11.50961	0.3084691	0.24334310	2.5409143	20	9 28.1	18.7
342095 2008 ST ₅₇	16.3	X	41.32301	232.11120	27.73287	15.07367	0.1692519	0.23762160	2.5815395	20	9 13.2	19.6
342096 2008 SZ ₅₇	16.7	X	281.78190	3.92936	31.20508	4.69427	0.1533048	0.23675113	2.5878633	20	8 11.4	19.8
342097 2008 SY ₆₀	17.4	X	21.66523	139.65376	252.06832	2.20971	0.2049370	0.26217301	2.4177463	20	—	—
342098 2008 SD ₆₁	17.5	X	39.76301	356.25116	341.49560	3.07790	0.2083684	0.25845798	2.4408594	20	12 26.1	20.9
342099 2008 SG ₆₂	17.4	X	74.29862	148.44370	180.84848	7.04586	0.1437329	0.26704895	2.3882262	20	—	—
342100 2008 SE ₆₃	17.1	X	259.42623	223.35541	195.41684	8.53004	0.1513258	0.23724492	2.5842713	20	8 7.5	20.8
342101 2008 SW ₆₄	16.5	X	56.36663	130.28498	188.40236	4.07310	0.1359164	0.17058532	3.2198942	20	11 23.4	21.1
342102 2008 SK ₆₅	16.1	X	295.66488	316.23751	19.65373	9.50342	0.2257563	0.23082448	2.6319732	20	5 23.2	19.4
342103 2008 SQ ₆₅	17.1	X	307.80109	328.05439	15.18403	2.04186	0.0704111	0.23151450	2.6267410	20	7 19.9	20.4
342104 2008 SS ₆₆	17.0	X	273.69902	220.86514	179.29912	13.68167	0.2157123	0.23692895	2.5865684	20	7 22.3	20.6
342105 2008 SA ₆₈	17.0	X	334.54424	177.31893	146.67027	4.46053	0.1715360	0.23967569	2.5667687	20	7 28.4	19.0
342106 2008 SG ₆₈	16.3	X	231.03854	92.30951	319.43521	11.92747	0.1714028	0.22669813	2.6638152	20	6 26.6	20.6
342107 2008 SF ₇₀	16.8	X	10.63723	22.19569	355.86442	6.24999	0.1371112	0.26021728	2.4298453	20	12 31.9	19.7
342108 2008 SL ₇₄	16.4	X	303.29862	180.35319	259.29261	6.71298	0.1159453	0.25214335	2.4814434	20	11 27.3	18.7
342109 2008 SA ₈₀	17.2	X	254.09868	177.95490	233.39091	2.26919	0.0796994	0.23742073	2.5829954	20	8 3.1	20.6
342110 2008 SB ₈₇	17.3	X	341.38501	316.01601	352.55070	14.24008	0.2175062	0.23912812	2.5706855	20	7 27.2	19.6
342111 2008 SJ ₈₈	17.3	X	259.43881	48.26432	16.58878	8.90888	0.1089471	0.23889989	2.5723225	20	8 29.3	20.7
342112 2008 SO ₉₀	17.2	X	316.85697	80.74293	246.25133	1.93293	0.1889672	0.23544421	2.5974311	20	6 25.3	19.7
342113 2008 SU ₉₃	16.8	X	47.02586	52.32209	241.43771	4.32929	0.0544297	0.24597365	2.5227662	20	10 12.0	20.0
342114 2008 SF ₉₄	16.9	X	294.21084	237.41354	220.85428	5.77805	0.1055590	0.25388290	2.4700955	20	12 9.4	19.4
342115 2008 SH ₉₅	16.2	X	301.95312	335.61187	7.43411	11.65097	0.1972757	0.23397617	2.6082845	20	6 19.6	19.5
342116 2008 SD ₉₆	17.7	X	308.86440	117.59827	325.29179	2.56175	0.1640335	0.25322981	2.4743407	20	12 12.2	19.8
342117 2008 SP ₉₉	16.7	X	209.93094	74.52238	60.06615	6.33632	0.0984499	0.24139186	2.5545886	20	9 30.3	20.2
342118 2008 SA ₁₀₂	16.4	X	316.84500	317.37394	25.85698	10.67283	0.1853378	0.23581935	2.5946757	20	7 25.3	19.3
342119 2008 SD ₁₀₃	16.3	X	261.70914	208.97750	203.90096	14.44908	0.0851965	0.23467271	2.6031208	20	8 10.7	20.0
342120 2008 SO ₁₀₃	16.6	X	192.44979	178.73194	206.71881	4.28389	0.0863578	0.21402837	2.7679304	20	4 18.1	20.8
342121 2008 SJ ₁₀₄	16.7	X	278.17722	11.34369	23.13746	5.24872	0.1592616	0.23536596	2.5980068	20	8 3.7	19.9
342122 2008 SC ₁₀₅	16.4	X	85.25256	52.67933	208.02297	12.92008	0.1236806	0.24571721	2.5245211	20	10 27.2	20.1
342123 2008 SW ₁₁₁	17.7	X	289.55842	122.75903	23.77100	4.21085	0.1040680	0.27031446	2.3689534	20	—	—
342124 2008 SR ₁₁₆	17.3	X	254.36775	214.48559	216.35881	3.95140	0.0379069	0.23953240	2.5677922	20	9 5.4	20.7
342125 2008 SZ ₁₁₆	16.6	X	93.48052	21.91764	205.59973	14.28523	0.2302491	0.24202445	2.5501353	20	10 1.3	20.7
342126 2008 SQ ₁₁₇	17.5	X	260.70145	16.59203	10.58397	1.58768	0.0828909	0.23089317	2.6314512	20	7 9.9	21.1
342127 2008 SW ₁₁₈	17.5	X	261.49810	256.21391	198.05639	5.39411	0.2200920	0.24206279	2.5498660	20	9 19.4	20.6
342128 2008 SB ₁₁₉	17.4	X	16.89149	98.30697	199.83087	3.53782	0.0906447	0.23963759	2.5670407	20	9 8.2	20.2
342129 2008 SP ₁₂₀	16.9	X	348.57465	128.34791	186.07549	2.84440	0.0703043	0.23566276	2.5958250	20	8 13.4	19.9
342130 2008 SZ ₁₂₀	17.8	X	16.10333	115.41411	210.32953	4.74556	0.1485216	0.24722816	2.5142247	20	10 27.2	20.7
342131 2008 SS ₁₂₂	17.4	X	243.45341	79.13577	349.35248	1.29176	0.0678194	0.23505468	2.6002999	20	8 15.1	20.9
342132 2008 SK ₁₂₄	17.5	X	233.63328	152.06704	297.36450	1.51672	0.1276588	0.23623246	2.5916499	20	8 22.0	21.1
342133 2008 SY ₁₂₄	17.1	X	299.83617	100.91329	211.02367	10.59026	0.1382558	0.22584417	2.6705259	20	5 13.9	20.4
342134 2008 SB ₁₂₇	17.1	X	34.98690	58.49926	216.52449	4.14728	0.1042619	0.23916018	2.5704558	20	9 5.2	20.3
342135 2008 SN ₁₂₇	17.2	X	211.06834	71.42692	32.71853	6.31292	0.2671823	0.22779836	2.6552311	20	8 7.3	21.8
342136 2008 SO ₁₂₇	16.5	X	278.95107	337.37374	59.49524	5.28755	0.1418728	0.23268411	2.6179312	20	8 11.0	19.7
342137 2008 SX ₁₂₇	16.4	X	309.33975	86.05317	217.30511	11.53830	0.2627108	0.22910038	2.6451614	20	4 24.6	19.4
342138 2008 SY ₁₂₇	16.0	X	150.36646	183.73161	16.73946	15.41019	0.0509493	0.24460110	2.5321948	20	10 16.4	19.6
342139 2008 SO ₁₂₈	17.1	X	348.03913	353.41492	0.56945	5.02786	0.1625772	0.24528942	2.5274554	20	10 17.0	19.6
342140 2008 SH ₁₂₉	16.7	X	187.68545	131.72232	357.63716	3.85415	0.1164698	0.23334351	2.6129969	20	8 25.4	20.7
342141 2008 SN ₁₂₉	17.0	X	180.92446	115.44810	325.44553	2.53355	0.0293137	0.22269478	2.6956449	20	6 16.0	20.8
342142 2008 SP ₁₂₉	16.9	X	261.41237	160.21922	246.56358	3.15302	0.1086574	0.23354985	2.6114576	20	8 1.6	20.3
342143 2008 SQ ₁₂₉	17.1	X	325.46508	28.78772	320.92591	2.25686	0.1877302	0.23924738	2.5698311	20	8 20.1	19.1
342144 2008 SE ₁₃₀	16.4	X	295.30757	178.43855	207.42099	15.29486	0.2517335	0.23796487	2.5790563	20	7 27.4	19.7
342145 2008 SO ₁₃₁	16.8	X	26.75498	324.52175	11.46806	6.29548	0.0662012	0.24772092	2.5108895	20	11 3.1	20.1
342146 2008 SV ₁₃₁	18.1	X	316.60322	77.03132	12.99355	6.73292	0.1446718	0.25490613	2.4634809	20	—	—
342147 2008 SM ₁₃₂	16.6	X	214.39279	254.58829	212.17237	12.57083	0.1316581	0.23412730	2.6071620	20	8 18.1	20.8
342148 2008 SX ₁₃₈	17.1	X	346.11925	213.93293	108.65863	3.99509	0.1816836	0.23902882	2.5713974	20	8 27.3	19.3
342149 2008 SN ₁₃₉	17.1	X	90.81113	290.32270	24.12713	4.72966	0.1962267	0.26745114	2.3858314	20	—	—
342150 2008 SW ₁₃₉	17.4	X	79.76674	128.96581	205.17212	6.59647	0.1376135	0.26627716	2.3928388	20	—	—
342151 2008 SO ₁₄₂	17.2	X	288.39971	160.01124	187.20608	4.31047	0.1688362	0.22935695	2.6431884	20	6 9.6	20.7
342152 2008 SR ₁₄₂	16.7	X	332.72908	87.12990	204.69151	12.67338	0.1824527	0.22830908	2.6512698	20	6 5.2	19.5
342153 2008 SS ₁₄₂	17.0	X	301.38249	216.43858	123.45012	1.89913	0.0759211	0.22884493	2.6471295	20		

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342161 2008 SR ₁₅₂	18.0	X	62.05369	325.56919	358.09285	2.44703	0.2082380	0.26280704	2.4138562	20	—	—
342162 2008 SU ₁₅₄	17.5	X	279.09419	251.59985	122.16309	2.38393	0.2254244	0.23522049	2.5990778	20	6 23.8	20.8
342163 2008 SO ₁₅₆	16.8	X	323.66819	175.69477	185.14042	14.24979	0.3305638	0.24151105	2.5537481	20	8 14.1	18.5
342164 2008 SG ₁₅₉	17.6	X	35.04434	65.73391	281.68767	1.58828	0.1990310	0.25830380	2.4418305	20	12 31.6	20.8
342165 2008 SC ₁₆₁	17.0	X	215.62263	270.64915	184.64827	14.74584	0.1499637	0.23608741	2.5927113	20	8 4.3	21.2
342166 2008 SX ₁₆₂	16.8	X	356.71066	5.53253	39.05313	2.96812	0.2024544	0.25810986	2.4430535	20	—	—
342167 2008 SB ₁₆₅	17.0	X	284.13397	192.60880	190.76773	12.03319	0.1768898	0.23640235	2.5904081	20	7 20.2	20.4
342168 2008 SC ₁₆₅	16.2	X	328.82163	277.47446	19.81365	26.78016	0.2360205	0.23340426	2.6125435	20	5 15.4	19.2
342169 2008 SL ₁₆₅	17.7	X	355.69633	37.16261	8.93344	5.40211	0.1280110	0.25973292	2.4328652	20	—	—
342170 2008 SE ₁₇₇	16.7	X	304.62609	178.87725	173.73402	10.84938	0.1509117	0.23573889	2.5952661	20	7 15.2	19.8
342171 2008 SB ₁₇₈	17.1	X	287.29811	330.42271	54.31043	2.92272	0.0804979	0.23591682	2.5939610	20	8 15.9	20.3
342172 2008 SL ₁₈₀	17.5	X	313.24587	290.17626	24.15235	5.89650	0.1386059	0.23004799	2.6378924	20	6 6.1	20.6
342173 2008 SM ₁₈₀	17.4	X	282.28167	235.28783	197.79237	11.95859	0.2084431	0.24362651	2.5389434	20	9 24.2	20.2
342174 2008 SB ₁₈₂	16.3	X	268.86329	342.87350	34.54994	12.57363	0.1971943	0.23023756	2.6364443	20	6 18.4	20.2
342175 2008 SK ₁₈₂	17.2	X	35.46814	231.95543	33.50815	12.59576	0.1997113	0.23850504	2.5751608	20	9 16.2	20.4
342176 2008 SW ₁₈₂	17.5	X	341.37273	294.47780	54.89293	4.44887	0.1044679	0.24106630	2.5668880	20	9 26.1	20.2
342177 2008 SE ₁₈₃	17.3	X	299.46574	132.84506	202.12407	14.36361	0.1488328	0.22894021	2.6463950	20	6 12.2	20.7
342178 2008 SJ ₁₈₄	17.2	X	317.46354	349.03319	37.01330	4.99112	0.2118220	0.24056565	2.5604343	20	9 29.5	19.1
342179 2008 SF ₁₈₅	16.7	X	349.89657	26.83972	284.11356	4.71085	0.3238175	0.24173114	2.5521977	20	8 23.7	17.8
342180 2008 SL ₁₈₅	16.5	X	244.96572	63.63850	349.83258	9.30392	0.1143708	0.23105849	2.6301959	20	7 23.0	20.3
342181 2008 SW ₁₈₅	16.9	X	191.56637	200.72301	295.32932	7.01949	0.2124355	0.23828841	2.5767212	20	8 29.4	21.2
342182 2008 SZ ₁₈₆	17.2	X	11.62592	36.37941	382.06660	3.01868	0.0829115	0.24397277	2.5365406	20	9 27.6	20.3
342183 2008 SX ₁₉₀	16.7	X	345.81863	345.97318	349.60368	9.57618	0.1063766	0.24394201	2.5367538	20	9 12.1	19.2
342184 2008 SO ₁₉₂	16.8	X	246.11045	270.79848	110.83988	3.81465	0.0707534	0.22574329	2.6713215	20	6 14.8	20.5
342185 2008 SD ₁₉₅	16.9	X	22.24741	95.43601	197.11313	4.77158	0.0965523	0.23837146	2.5761227	20	9 9.2	19.8
342186 2008 SN ₁₉₆	17.2	X	256.20985	172.82088	199.96196	5.51829	0.0433473	0.22450759	2.6811145	20	6 19.6	21.0
342187 2008 SM ₁₉₈	17.1	X	193.34623	34.86941	94.30870	3.65463	0.1357188	0.23304610	2.6152191	20	8 30.6	21.1
342188 2008 SH ₂₀₁	16.9	X	208.25867	198.87381	218.47982	5.86502	0.0369478	0.22428700	2.6828722	20	6 18.6	20.7
342189 2008 SR ₂₀₁	16.8	X	294.76334	340.08708	13.85399	6.49221	0.2994356	0.23459831	2.6036711	20	6 4.9	20.1
342190 2008 SV ₂₀₂	17.9	X	10.19921	306.38306	23.68065	1.48083	0.2080476	0.24671577	2.5177046	20	11 1.5	20.4
342191 2008 SX ₂₀₃	17.5	X	18.46533	249.96029	46.57442	12.32625	0.1867335	0.24070142	2.5594714	20	9 30.2	20.4
342192 2008 SL ₂₀₄	17.9	X	240.22759	225.63485	186.98297	8.25258	0.2039235	0.22818075	2.6522638	20	7 1.9	22.1
342193 2008 SO ₂₀₅	17.0	X	226.79649	275.60078	171.63355	6.30511	0.1804369	0.23142087	2.6274494	20	8 4.1	21.1
342194 2008 SO ₂₀₈	16.4	X	132.38782	261.98645	219.14008	12.12222	0.1726755	0.21195658	2.7859380	20	6 19.9	21.0
342195 2008 SV ₂₀₈	17.2	X	293.21959	298.65307	80.42253	3.33901	0.2240949	0.23375447	2.6099335	20	7 23.9	20.0
342196 2008 SK ₂₁₁	16.9	X	321.29111	130.97576	208.69964	13.26194	0.1827981	0.23739734	2.5831650	20	7 21.4	19.7
342197 2008 SE ₂₁₂	16.4	X	156.84740	281.27603	297.65135	11.05310	0.0535545	0.25691675	2.4506113	20	11 17.9	20.0
342198 2008 SM ₂₁₃	17.8	X	102.55515	73.14255	213.38853	2.57661	0.1629594	0.26283084	2.4137105	20	12 20.9	21.6
342199 2008 SY ₂₁₆	16.7	X	38.16134	312.38652	311.06848	6.74629	0.1412731	0.24120790	2.5558873	20	8 30.8	19.7
342200 2008 SG ₂₁₈	16.4	X	8.67496	0.18638	332.08696	9.12467	0.2254063	0.24615639	2.5215174	20	10 31.3	19.1
342201 2008 SW ₂₁₈	16.9	X	1.24615	343.55705	337.92868	5.32891	0.0762505	0.24460235	2.5321862	20	9 15.4	19.8
342202 2008 SE ₂₂₀	17.9	X	8.23007	137.30503	247.87459	1.52145	0.1814785	0.25787067	2.4445640	20	—	—
342203 2008 SS ₂₂₀	17.6	X	29.83307	144.91813	206.34082	2.13695	0.2007521	0.26016285	2.4301842	20	12 30.9	20.7
342204 2008 SZ ₂₂₃	17.6	X	265.83938	348.72534	99.18290	2.72134	0.2053973	0.24527729	2.5275388	20	9 22.5	20.6
342205 2008 ST ₂₂₅	17.7	X	17.76240	172.33122	111.94569	0.61765	0.1501767	0.23801381	2.5787027	20	8 29.6	20.2
342206 2008 ST ₂₃₀	16.7	X	105.11438	297.83244	205.66000	10.49551	0.0544570	0.22460855	2.6803110	20	6 6.9	20.5
342207 2008 SX ₂₃₀	17.5	X	166.86030	11.66893	248.14923	3.93882	0.1285934	0.27079120	2.3661722	20	—	—
342208 2008 SK ₂₃₆	17.3	X	227.67054	149.37991	303.03702	2.04466	0.0962364	0.23662018	2.5888181	20	8 22.8	20.8
342209 2008 SL ₂₃₉	17.3	X	356.68495	96.33117	165.71943	5.27926	0.1753589	0.23257150	2.6187762	20	6 12.7	19.7
342210 2008 SD ₂₄₀	17.2	X	334.57996	289.94475	47.76102	10.88891	0.1225555	0.23906187	2.5711604	20	8 31.1	20.1
342211 2008 SG ₂₄₀	17.0	X	235.65845	295.43232	121.66676	4.14081	0.0954966	0.23039240	2.6352629	20	7 16.2	20.7
342212 2008 ST ₂₄₃	16.4	X	317.01934	54.53336	278.70766	7.68533	0.1077623	0.23485922	2.6017425	20	7 15.3	19.3
342213 2008 SD ₂₄₄	17.0	X	106.16690	278.35103	345.05034	6.13876	0.0910453	0.25595710	2.4567328	20	11 18.9	20.6
342214 2008 SG ₂₄₆	17.0	X	104.85683	353.86399	318.00307	5.46172	0.1477560	0.26853900	2.3793837	20	—	—
342215 2008 SV ₂₄₆	15.8	X	299.93877	310.88893	87.90107	22.75944	0.0534368	0.24198392	2.5504200	20	10 11.8	19.5
342216 2008 SE ₂₄₈	16.9	X	218.53547	278.97821	201.26879	9.70932	0.0826781	0.24121592	2.5558306	20	9 18.6	20.4
342217 2008 SS ₂₄₈	16.6	X	240.57860	58.63718	354.28396	6.64384	0.3205393	0.22894388	2.6463667	20	6 22.3	21.1
342218 2008 SR ₂₄₉	16.9	X	23.99442	12.32965	262.29402	4.74047	0.2039184	0.24249183	2.5468575	20	9 1.9	19.6
342219 2008 SW ₂₅₃	16.7	X	93.40220	161.94962	69.65124	4.84887	0.0724321	0.24240606	2.5474582	20	9 25.0	20.2
342220 2008 SQ ₂₅₈	16.6	X	270.34448	191.72998	254.23832	12.00898	0.2325930	0.24420804	2.5349111	20	9 13.4	20.0
342221 2008 SF ₂₆₀	17.1	X	359.33076	95.97051	167.23539	11.49758	0.2343134	0.23224589	2.6212233	20	6 21.9	19.4
342222 2008 SH ₂₆₀	16.7	X	119.61521	35.08824	114.35221	5.84798	0.0954166	0.22538879	2.6741218	20	7 7.4	20.6
342223 2008 SK ₂₆₂	17.8	X	350.31728	267.74170	86.79652	2.26904	0.0848103	0.24694368	2.5161553	20	10 17.9	20.7
342224 2008 SX ₂₆₂	17.4	X	335.84632	219.29157	114.74183	0.54352	0.1449421	0.23943141	2.5685142	20	8 20.8	19.6
342225 2008 SN ₂₆₅	16.6	X	355.97603	27.73964	242.42826	7.81944	0.1148292	0.22531894	2.6746744	20	6 22.5	19.4
342226 2008 SE ₂₆₆	16.9	X	316.92077	174.90403	193.73308	15.60219	0.2739359	0.23967666	2.5667617	20	8 14.6	19.3
342227 2008 SW ₂₆₆	16.4	X	288.94670	59.98751	289.60993	10.30886	0.2049240	0.23061975	2.6335307	20	6 7.2	19.9
342228 2008 SB ₂₆₇	17.1	X	322.54483	107.38602	209.58056	11.97102	0.1879874	0.23286279	2.6165919	20	6 20.7	19.9
342229 2008 SO ₂₆₇	16.9	X	156.91805	134.65282	326.40208	5.16326	0.0414632	0.22244878	2.6976320	20	6 13.1	20.7
342230 2008 SO ₂₆₈	16.2	X	311.68960	229.46136	123.30952	15.92953	0.1983241	0.23629604	2.5911850	20	7 23.4	18.6
342231 2008 SP ₂₆₈	16.4	X	313.38132	266.17424	54.26184	13.17030	0.2020076	0.22780338	2.6551921	20	6 4.6	19.3
342232 2008 SC ₂₆₉	16.4	X	329.51825	16.50404	303.61151	8.65692	0.1899650	0.23476118	2.6024668	20	7 12.5	18.6
342233 2008 SW ₂₆₉	16.0	X	16.74002	39.32097	257.64733							

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342241 2008 SR ₂₇₆	17.5	X	242.59136	210.21880	197.83373	2.14666	0.1559927	0.23139131	2.6276732	20	7 4.6	21.3
342242 2008 SF ₂₇₉	16.6	X	98.39196	200.97871	35.00451	9.49268	0.0837260	0.24217512	2.5490775	20	10 7.5	20.3
342243 2008 SA ₂₈₂	16.2	X	195.74384	212.64229	225.29785	10.62551	0.1553850	0.22348295	2.6893033	20	6 24.4	20.6
342244 2008 SU ₂₈₂	16.9	X	212.68940	55.25281	343.60228	4.92527	0.0784700	0.22107210	2.7088197	20	5 26.3	20.9
342245 2008 SC ₂₈₃	15.8	X	267.93026	50.53051	315.73468	13.17714	0.0296690	0.22719924	2.6598969	20	6 30.7	19.4
342246 2008 SE ₂₈₃	16.3	X	353.49567	97.14177	266.87568	12.94570	0.0606726	0.24661965	2.5183588	20	10 29.2	19.5
342247 2008 ST ₂₈₄	16.3	X	317.36999	315.29967	2.21547	8.59677	0.1317061	0.22984499	2.6394454	20	6 19.8	19.5
342248 2008 SC ₂₈₅	17.5	X	1.82553	334.91999	307.22414	2.30259	0.0737056	0.22903529	2.6456626	20	7 20.2	20.3
342249 2008 SU ₂₈₅	16.9	X	29.26492	266.91409	37.26921	13.69111	0.2208357	0.24721924	2.5142852	20	10 29.5	19.7
342250 2008 SQ ₂₈₆	16.4	X	197.65698	251.16891	212.30956	21.66485	0.0725435	0.22899804	2.6459494	20	7 28.4	20.8
342251 2008 SU ₂₈₆	16.3	X	315.31090	57.23247	288.46859	10.74551	0.1468599	0.23859178	2.5745366	20	7 25.9	19.0
342252 2008 SV ₂₈₈	17.3	X	267.05196	351.26510	166.13696	1.66667	0.1141667	0.26032082	2.4292010	20	—	—
342253 2008 SR ₂₈₉	17.2	X	354.26529	159.94863	158.41102	3.95452	0.1940908	0.24015046	2.5633846	20	9 8.5	19.1
342254 2008 SZ ₂₉₅	16.1	X	210.65055	327.16242	92.67574	14.45481	0.1547504	0.22642205	2.6659801	20	6 16.9	20.3
342255 2008 SL ₂₉₆	17.0	X	335.67393	217.76936	114.87908	5.69275	0.1916136	0.24107043	2.5568589	20	8 18.6	19.2
342256 2008 SK ₂₉₈	16.9	X	283.13114	54.48152	356.54376	10.21468	0.1345115	0.24123774	2.5556765	20	9 8.4	19.7
342257 2008 SW ₂₉₈	17.4	X	80.09487	295.88861	7.83123	7.84559	0.2244313	0.26379564	2.4078216	20	12 25.6	21.5
342258 2008 SN ₃₀₀	16.2	X	350.03294	289.79177	351.44046	11.74451	0.0773914	0.23229637	2.6208436	20	6 30.6	19.5
342259 2008 SB ₃₀₁	17.5	X	276.75037	87.78506	280.55870	5.13667	0.2121411	0.23217326	2.6217700	20	6 15.2	21.0
342260 2008 SP ₃₀₁	17.2	X	213.64578	131.19165	305.21141	3.83143	0.1766402	0.22859709	2.6490424	20	7 9.6	21.5
342261 2008 SX ₃₀₂	15.9	X	232.60522	86.40422	276.71604	13.02446	0.0844137	0.22265478	2.6959678	20	4 29.6	20.1
342262 2008 SS ₃₀₅	17.3	X	102.41671	174.16570	136.80126	1.73398	0.2368935	0.26929344	2.3749376	20	—	—
342263 2008 SP ₃₀₆	16.8	X	329.47804	8.48231	23.90409	16.06850	0.1335325	0.24609144	2.5219611	20	11 2.5	19.4
342264 2008 SP ₃₀₇	17.0	X	225.56241	244.64984	185.56782	10.33810	0.1807210	0.23002657	2.6380562	20	7 11.4	21.3
342265 2008 SG ₃₀₈	16.6	X	293.23559	169.11688	176.91606	6.31615	0.0613071	0.22366324	2.6878579	20	7 1.2	20.1
342266 2008 SS ₃₀₉	16.5	X	288.48271	118.70061	256.88621	1.92291	0.2184956	0.23327902	2.6134785	20	7 11.1	19.4
342267 2008 ST ₃₀₉	16.9	X	245.87351	274.26347	169.31228	3.97965	0.1761251	0.23356351	2.6113559	20	8 21.9	20.5
342268 2008 SV ₃₀₉	16.9	X	253.03657	221.13664	138.52873	3.79127	0.1028806	0.21981309	2.7191532	20	5 21.7	20.7
342269 2008 SX ₃₀₉	16.4	X	296.73601	265.84614	101.94412	5.49133	0.1377701	0.23107404	2.6300779	20	7 27.7	19.5
342270 2008 SC ₃₁₀	16.7	X	312.11688	83.44500	300.94722	4.24157	0.2461354	0.23771741	2.5808458	20	9 4.3	18.8
342271 2008 TJ ₅	18.3	X	322.79210	3.46074	12.13239	10.26131	0.2244366	0.24510017	2.5287563	20	9 26.1	20.1
342272 2008 TN ₆	16.7	X	314.24107	200.45381	191.52680	11.09024	0.1434010	0.24308517	2.5427114	20	10 5.2	19.2
342273 2008 TY ₆	16.1	X	158.79620	197.89608	8.26747	6.14341	0.0931813	0.25352568	2.4724153	20	11 2.3	19.8
342274 2008 TZ ₇	16.8	X	224.81451	281.33647	173.63613	6.03903	0.1424202	0.23703148	2.5858224	20	8 16.7	20.7
342275 2008 TZ ₈	16.7	X	313.43629	210.78566	132.26490	5.70837	0.2617634	0.23690120	2.5867703	20	6 30.8	19.0
342276 2008 TW ₉	17.2	X	23.68938	315.05400	28.78102	9.98020	0.3048511	0.25702842	2.4499015	20	12 28.4	20.6
342277 2008 TE ₁₀	17.4	X	76.90797	297.78461	0.72166	8.21346	0.2615455	0.26043580	2.4284859	20	12 18.2	21.5
342278 2008 TN ₁₄	16.7	X	153.61896	1.78024	204.47297	5.86078	0.1076405	0.25239091	2.4798205	20	10 29.5	20.2
342279 2008 TF ₁₇	17.2	X	294.96630	93.97976	234.43214	2.82452	0.1138836	0.22560929	2.6723791	20	6 1.7	20.4
342280 2008 TO ₁₉	16.7	X	128.24113	139.58855	38.09197	14.03984	0.1848360	0.22856856	2.6492629	20	9 5.1	21.2
342281 2008 TV ₁₉	17.3	X	325.95354	134.39230	210.77302	8.90094	0.2210021	0.23830259	2.5766190	20	8 6.7	19.7
342282 2008 TO ₂₁	17.3	X	325.92855	151.66286	212.56502	3.03128	0.1396184	0.24061378	2.5600928	20	9 14.9	19.8
342283 2008 TS ₂₁	17.3	X	29.29494	67.18645	223.47273	2.91212	0.1257781	0.23979551	2.5659135	20	9 22.5	20.3
342284 2008 TN ₂₂	16.8	X	177.03789	264.46966	171.85145	8.49837	0.2427995	0.21422878	2.7662038	20	6 6.7	21.8
342285 2008 TV ₂₂	16.9	X	266.99588	302.83185	44.99238	6.06145	0.0841587	0.22100919	2.7093337	20	5 24.4	20.5
342286 2008 TT ₂₃	17.9	X	52.72304	107.79547	191.99403	2.14619	0.1965247	0.25593843	2.4568523	20	11 20.6	21.2
342287 2008 TX ₂₄	17.4	X	37.61443	111.49485	153.18154	5.98272	0.1899311	0.24237604	2.5476685	20	9 11.8	20.2
342288 2008 TT ₂₅	15.6	X	332.66392	309.59187	41.96012	8.33899	0.2225442	0.23801620	2.5786855	20	9 13.9	17.7
342289 2008 TH ₂₇	17.0	X	259.17136	185.55906	236.27134	10.20832	0.1339283	0.23844595	2.5755862	20	8 12.2	20.6
342290 2008 TS ₃₂	16.6	X	237.02422	189.41687	161.62528	3.32761	0.0989170	0.21870232	2.7283523	20	4 22.7	20.5
342291 2008 TL ₃₃	17.4	X	318.41827	142.63581	176.25579	5.18151	0.2902721	0.23548385	2.5971396	20	5 30.1	20.0
342292 2008 TR ₃₃	17.1	X	95.22480	78.75744	132.53867	2.33009	0.1036785	0.23517241	2.5994320	20	8 31.9	20.7
342293 2008 TZ ₃₅	16.8	X	214.84556	313.33366	208.06661	5.83149	0.0917038	0.25414962	2.4683671	20	11 10.6	20.0
342294 2008 TP ₃₈	16.1	X	193.46664	83.85432	18.77875	18.29500	0.1742130	0.22738348	2.6584599	20	7 30.9	20.8
342295 2008 TX ₄₄	16.8	X	308.45491	324.09345	28.57329	5.14317	0.2867989	0.23662423	2.5887885	20	7 1.1	19.3
342296 2008 TK ₄₅	16.8	X	346.15852	273.75702	29.20411	7.72201	0.1940082	0.23438460	2.6052536	20	7 26.9	19.2
342297 2008 TL ₄₆	15.9	X	165.70754	117.22861	40.89835	31.25300	0.2623690	0.23088033	2.6315488	20	9 24.8	21.1
342298 2008 TU ₄₇	16.8	X	238.70424	271.92030	164.38103	5.15470	0.2247684	0.23168147	2.6254788	20	7 28.8	20.9
342299 2008 TC ₄₈	16.3	X	229.02231	329.12135	49.20068	15.45481	0.1226819	0.22041652	2.7141882	20	5 14.8	20.4
342300 2008 TD ₅₀	17.8	X	250.92954	210.10252	192.16093	2.89980	0.0718047	0.23297725	2.6157348	20	7 18.4	21.4
342301 2008 TC ₅₃	16.8	X	237.78643	209.16788	186.43643	8.11812	0.0919516	0.22835069	2.6509477	20	6 20.3	20.7
342302 2008 TL ₅₃	17.8	X	274.80671	65.89973	358.05726	4.26803	0.2362763	0.24521835	2.5279438	20	8 27.5	20.8
342303 2008 TQ ₅₄	17.2	X	53.15588	134.73077	207.20718	7.77774	0.0543045	0.25832913	2.4416709	20	12 26.1	20.6
342304 2008 TU ₅₅	17.3	X	72.78467	273.78354	22.06742	9.23074	0.2766767	0.25825246	2.4421541	20	12 11.7	21.5
342305 2008 TM ₆₀	17.3	X	110.59842	77.16449	177.68810	6.97153	0.0858012	0.25287852	2.4766316	20	11 15.6	21.0
342306 2008 TN ₆₁	17.3	X	256.06271	253.00475	209.26619	4.35439	0.1453594	0.24458976	2.5322731	20	10 5.6	20.5
342307 2008 TX ₆₄	16.9	X	284.66359	220.36624	255.69787	6.20426	0.1232309	0.25711997	2.4493199	20	12 17.4	19.1
342308 2008 TG ₆₅	16.7	X	346.25947	289.07432	358.24128	11.51143	0.1793859	0.23716369	2.5848613	20	6 30.3	19.3
342309 2008 TZ ₆₅	17.9	X	337.67439	85.95237	322.62334	1.78706	0.1987356	0.25368087	2.4714068	20	12 25.3	20.1
342310 2008 TO ₆₆	17.3	X	315.47739	303.32767	52.97218	4.95208	0.1465999	0.23785859	2.5798244	20	8 15.5	20.0
342311 2008 TQ ₆₆	17.0	X	48.51670	68.36589	198.08623	9.27175	0.1408445	0.23974427	2.5662791	20	9 19.4	20.2
342312 2008 TT ₆₇	17.6	X	255.92756	344.05890	110.89874	2.75141	0.1268897	0.24192441	2.5508383	20	9 30.1	20.7
342313 2008 TF ₆₉	16.5	X	288.40414	243.67382	38.86936	13.65600						

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342321 2008 TJ ₈₃	17.4	X	19.54639	78.72262	221.01141	5.76899	0.0976025	0.24295761	2.5436013	20	9 14.9	20.4
342322 2008 TJ ₈₄	16.5	X	187.79920	266.07186	198.21331	9.80985	0.1285817	0.22990695	2.6389712	20	7 20.1	20.8
342323 2008 TL ₈₉	16.7	X	42.48186	67.30277	210.07486	1.50334	0.1034888	0.24035747	2.5619126	20	9 21.1	19.8
342324 2008 TK ₉₂	17.9	X	71.94334	130.64405	173.93756	3.40732	0.1891954	0.25925058	2.4358819	20	12 15.8	21.7
342325 2008 TQ ₉₄	17.5	X	82.84795	252.72944	115.58958	4.83229	0.2802613	0.27080696	2.3660804	20	—	—
342326 2008 TT ₁₀₂	16.8	X	295.55104	186.05042	198.73978	8.50703	0.1651059	0.23921240	2.5700817	20	8 12.6	19.8
342327 2008 TQ ₁₀₄	17.4	X	354.45487	49.33451	225.38674	3.14180	0.0200212	0.22696230	2.6617477	20	6 26.5	20.8
342328 2008 TL ₁₀₅	18.1	X	329.66578	144.02991	291.07942	0.41708	0.1656949	0.25546192	2.4599065	20	—	—
342329 2008 TS ₁₀₅	17.6	X	73.15835	121.34732	218.35753	3.68933	0.0738476	0.26237606	2.4164988	20	—	—
342330 2008 TC ₁₁₁	16.7	X	315.73901	145.29580	206.93365	31.45197	0.1911208	0.23822620	2.5771698	20	7 23.1	20.3
342331 2008 TJ ₁₁₁	16.8	X	278.93926	79.09773	335.93535	3.52426	0.1943755	0.23918511	2.5702771	20	8 26.6	19.8
342332 2008 TL ₁₁₁	15.8	X	247.26623	176.06313	223.24215	11.10006	0.1766017	0.22910980	2.6450889	20	6 25.0	19.9
342333 2008 TL ₁₁₄	16.2	X	237.75495	119.93082	62.84623	7.28759	0.0789647	0.26016512	2.4301701	20	—	—
342334 2008 TN ₁₁₄	16.8	X	331.59375	148.51267	177.45591	5.63514	0.2662531	0.23837041	2.5761303	20	7 17.7	18.7
342335 2008 TV ₁₁₇	16.5	X	295.94869	339.22661	45.57304	13.43226	0.1802217	0.23679920	2.5875131	20	8 21.4	19.6
342336 2008 TJ ₁₁₉	17.0	X	193.92197	171.97373	226.99333	1.57421	0.0868029	0.22022548	2.7157576	20	5 6.5	21.1
342337 2008 TS ₁₁₉	17.6	X	313.09399	80.01749	4.62099	2.50386	0.1711923	0.25501245	2.4627961	20	12 25.2	19.7
342338 2008 TE ₁₂₁	16.2	X	239.98340	318.50258	105.55323	6.99016	0.1943174	0.23181316	2.6244843	20	7 18.8	20.2
342339 2008 TN ₁₂₂	17.3	X	5.09365	226.58506	105.37924	0.78029	0.0198260	0.24180951	2.5516463	20	10 1.6	20.4
342340 2008 TH ₁₂₆	16.3	X	338.73164	291.86369	359.57227	11.86538	0.1922885	0.23366768	2.6105797	20	6 15.6	19.0
342341 2008 TD ₁₂₉	16.5	X	203.57918	110.71788	350.32968	11.41662	0.0985280	0.23375281	2.6099458	20	8 9.6	20.4
342342 2008 TM ₁₃₂	16.2	X	172.31729	144.41310	8.05197	11.46674	0.1595970	0.23580553	2.5947771	20	9 9.3	20.3
342343 2008 TV ₁₃₇	17.0	X	309.91841	237.21999	173.72174	2.98743	0.2447649	0.24298491	2.5434108	20	10 17.7	18.9
342344 2008 TD ₁₅₇	16.5	X	306.48833	276.51422	15.47266	11.47284	0.1864000	0.22475640	2.6791355	20	4 16.2	19.8
342345 2008 TZ ₁₅₇	15.8	X	320.50260	304.62618	351.58006	14.29874	0.1077654	0.22503649	2.6769119	20	5 23.8	19.3
342346 2008 TT ₁₅₈	17.4	X	251.37379	88.37914	293.50347	2.15461	0.1336930	0.23007635	2.6376757	20	6 13.1	21.0
342347 2008 TS ₁₆₀	16.5	X	121.40143	356.17328	206.83528	14.22164	0.0169469	0.24004783	2.5641152	20	9 9.6	20.1
342348 2008 TN ₁₆₂	17.2	X	310.04115	217.87722	155.47169	4.89079	0.1756021	0.24098997	2.5574279	20	8 24.9	19.6
342349 2008 TD ₁₆₆	16.8	X	51.36148	176.29405	90.96891	3.63715	0.0784397	0.23650572	2.5896533	20	9 17.8	20.2
342350 2008 TL ₁₆₈	17.0	X	252.55953	274.28865	133.09512	2.79583	0.0952526	0.22752502	2.6573572	20	7 24.2	20.5
342351 2008 TF ₁₆₉	16.5	X	312.10818	182.94728	187.35785	14.39598	0.1083867	0.23698786	2.5861397	20	8 28.3	19.6
342352 2008 TZ ₁₆₉	17.5	X	347.21409	81.15377	225.54029	9.90865	0.2433570	0.23801304	2.5787083	20	7 29.2	19.7
342353 2008 TG ₁₇₀	16.0	X	228.91042	359.79622	92.47153	13.17049	0.1512735	0.23352147	2.6116692	20	8 21.7	20.0
342354 2008 TU ₁₇₀	16.5	X	48.58768	203.25099	56.34895	10.18735	0.1292321	0.23150208	2.6268350	20	9 14.7	20.0
342355 2008 TD ₁₇₇	17.0	X	324.17794	208.84507	185.74922	16.62883	0.2492317	0.24502356	2.5292833	20	11 2.7	18.8
342356 2008 TB ₁₇₈	16.1	X	283.17895	17.63617	299.98274	12.69633	0.1634130	0.22493888	2.6776863	20	4 17.3	20.1
342357 2008 TY ₁₈₀	15.9	X	19.51570	224.92116	157.93153	5.73656	0.1513923	0.17332599	3.1858617	20	12 25.9	20.1
342358 2008 TW ₁₈₁	17.7	X	346.16283	153.81515	160.47967	2.61157	0.0894222	0.23565153	2.5959074	20	8 9.9	20.4
342359 2008 TB ₁₈₂	16.2	X	255.14672	292.68059	91.84118	12.77534	0.0509022	0.22970908	2.6404864	20	7 3.3	19.6
342360 2008 TF ₁₈₂	16.1	X	285.14870	299.17032	115.56431	14.11690	0.1560217	0.23919930	2.5701755	20	9 18.0	19.3
342361 2008 TM ₁₈₃	17.0	X	326.07661	292.94813	42.48065	2.48096	0.0796911	0.23204025	2.6227718	20	8 7.3	20.1
342362 2008 TH ₁₈₅	15.7	X	245.57698	97.83190	260.16371	15.65395	0.0883411	0.22085157	2.7106226	20	5 9.7	19.8
342363 2008 TK ₁₈₅	17.0	X	204.85154	101.04798	94.83884	4.06826	0.1249933	0.25251499	2.4790080	20	12 8.1	20.3
342364 2008 TR ₁₈₅	17.0	X	347.98036	249.22351	62.26627	13.45767	0.2125215	0.23503773	2.6004250	20	8 20.0	19.5
342365 2008 TX ₁₈₇	17.0	X	344.54064	175.06089	259.79114	5.82819	0.0988070	0.26089379	2.4256430	20	—	—
342366 2008 TZ ₁₈₈	16.4	X	210.76644	80.22222	274.08839	5.97478	0.0890121	0.21171773	2.7880329	20	3 26.4	20.7
342367 2008 TK ₁₈₉	15.9	X	5.72623	228.83628	68.99744	13.10827	0.1934375	0.23455016	2.6040274	20	9 9.1	18.8
342368 2008 UJ ₂	17.0	X	12.83547	349.09009	301.71978	5.15748	0.1992702	0.23692931	2.5865658	20	9 3.4	19.5
342369 2008 UF ₄	16.5	X	256.85091	28.25160	37.35249	12.03040	0.2361633	0.23495818	2.6010118	20	8 8.6	20.4
342370 2008 UL ₄	16.7	X	275.02612	318.17646	58.66060	7.05107	0.2803463	0.23042037	2.6350496	20	6 13.8	20.4
342371 2008 UO ₅	16.5	X	258.48796	65.21365	22.89780	14.01392	0.1428740	0.23910243	2.5708697	20	9 24.1	19.8
342372 2008 UQ ₅	17.5	X	4.23859	116.56520	221.63170	6.39812	0.2188070	0.24641450	2.5197563	20	11 4.3	19.9
342373 2008 UR ₉	17.0	X	313.26193	80.63087	204.11053	13.98017	0.1065982	0.22537544	2.6742273	20	5 1.9	20.2
342374 2008 UH ₁₃	17.7	X	356.80435	129.10359	215.59340	1.77585	0.1417156	0.24770698	2.5109837	20	10 19.8	20.0
342375 2008 UO ₁₄	17.1	X	57.22726	232.16178	334.79441	1.77895	0.0722030	0.22971118	2.6404703	20	6 30.7	20.3
342376 2008 UX ₁₅	17.4	X	260.44674	38.73000	16.35825	7.03862	0.1405053	0.23695574	2.5863734	20	8 11.2	20.8
342377 2008 UD ₁₉	17.5	X	49.79027	319.18720	306.78900	0.25860	0.1157596	0.24010420	2.5637139	20	9 18.1	20.5
342378 2008 UY ₂₆	16.6	X	84.67913	43.06300	212.81424	8.39755	0.0901323	0.24228901	2.5482786	20	10 15.1	20.2
342379 2008 UB ₂₉	16.8	X	4.65911	279.72505	46.45830	14.54747	0.1142606	0.24099697	2.5573784	20	10 8.5	19.8
342380 2008 UU ₂₉	17.0	X	223.78452	168.55179	214.70054	14.67750	0.2065203	0.21994817	2.7180398	20	5 11.4	21.4
342381 2008 UT ₃₀	17.7	X	310.63965	114.93533	190.19843	4.49180	0.2263025	0.22703829	2.6611539	20	5 6.9	20.7
342382 2008 UF ₃₁	17.3	X	279.12437	199.00423	180.44188	3.78175	0.1283708	0.23174444	2.6250032	20	7 16.7	20.7
342383 2008 UL ₃₂	16.7	X	237.72610	325.71641	63.67718	7.23188	0.0458254	0.22327203	2.6909967	20	6 17.3	20.5
342384 2008 UV ₃₂	16.4	X	282.16428	207.57164	200.37586	6.61707	0.1340037	0.23761266	2.5816043	20	8 29.2	19.4
342385 2008 UA ₃₄	16.7	X	348.67939	238.88490	59.18559	8.95901	0.1737764	0.23214038	2.6220175	20	7 24.0	19.2
342386 2008 UK ₃₄	17.4	X	258.78510	230.48521	154.62490	3.00993	0.0836375	0.22723544	2.6596144	20	7 3.7	20.9
342387 2008 UN ₃₄	16.2	X	146.70062	34.48386	51.52684	14.52281	0.1318869	0.21244130	2.7816987	20	5 17.9	20.5
342388 2008 UT ₃₄	16.4	X	213.94701	329.82816	98.77254	3.90210	0.0437537	0.22556141	2.6727573	20	7 10.6	19.9
342389 2008 UT ₃₈	16.8	X	149.83560	219.95019	235.41165	9.14248	0.0863595	0.21467972	2.7623288	20	5 31.2	20.8
342390 2008 UP ₄₀	17.2	X	337.38247	335.38903	32.90454	6.84165	0.1709180	0.24347622	2.5399881	20	10 18.5	19.2
342391 2008 UG ₄₁	16.7	X	297.72222	344.25686	40.90375	8.36562	0.1865821	0.23678155	2.5876417	20	8 21.1	19.6
342392 2008 UK ₄₁	17.2	X	336.81475	2.75196	21.82935	0.97789	0.0658038	0.24521826	2.5279444	20	11 5.3	20.0
342393 2008 UV ₄₂	17.1	X	3.84412	236.60687	71.91787	4.07526	0.0658068					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342401 2008 UG ₅₄	16.0	X	321.90564	204.94325	62.67177	9.16402	0.1668937	0.21263532	2.7800063	20	4 16.2	19.3
342402 2008 UY ₅₄	17.0	X	252.45164	358.95041	46.11751	7.22902	0.2451564	0.23061826	2.6335421	20	7 1.2	21.0
342403 2008 UD ₅₆	17.1	X	190.17614	247.48304	11.78888	4.25823	0.0892125	0.27334201	2.3514286	20	—	—
342404 2008 UQ ₅₆	17.5	X	9.39217	16.90137	347.67937	4.69664	0.2182458	0.25781455	2.4449187	20	12 23.6	20.3
342405 2008 UX ₅₆	17.8	X	323.73531	170.58919	258.88848	1.34867	0.1799367	0.25732291	2.4480319	20	12 26.7	19.9
342406 2008 UL ₅₇	16.2	X	304.05907	304.53613	53.65163	6.01622	0.0466779	0.23332260	2.6131530	20	8 9.4	19.5
342407 2008 UG ₅₈	17.3	X	274.16672	254.99503	137.76015	3.43634	0.1053187	0.23374098	2.6100339	20	8 1.7	20.5
342408 2008 UM ₅₈	16.8	X	177.59877	349.72134	217.57580	3.48662	0.1236156	0.25588926	2.4571670	20	11 23.9	20.4
342409 2008 UP ₅₈	17.1	X	226.68782	256.67614	208.03605	7.93126	0.1242441	0.23952478	2.5678467	20	9 1.5	20.8
342410 2008 UD ₅₉	17.0	X	287.26985	218.25521	143.96000	4.05186	0.1137616	0.23077529	2.6323472	20	7 7.5	20.3
342411 2008 UJ ₆₅	16.9	X	320.68652	37.83069	276.92181	5.37410	0.0129121	0.22366900	2.6878118	20	7 3.9	20.3
342412 2008 UG ₆₅	16.2	X	34.59270	65.90413	248.77239	11.90179	0.1098286	0.24425394	2.5345936	20	10 30.7	19.4
342413 2008 UH ₆₆	17.0	X	10.78989	32.13374	295.27006	3.67800	0.1608025	0.24239801	2.5475146	20	10 19.2	19.7
342414 2008 UH ₆₆	15.9	X	7.23236	279.94384	30.11450	12.27966	0.2020593	0.23928648	2.5695512	20	9 29.0	18.4
342415 2008 UP ₆₇	16.2	X	39.15845	325.47106	260.05945	6.41496	0.0462661	0.22035197	2.7147182	20	6 25.4	19.6
342416 2008 UM ₇₀	17.0	X	312.84663	344.57077	325.93477	6.00510	0.0387581	0.22091097	2.7101367	20	6 13.9	20.5
342417 2008 UO ₇₀	16.7	X	197.45964	64.24721	343.38236	5.92636	0.10367587	0.21575430	2.7531492	20	5 21.6	20.6
342418 2008 UG ₇₁	16.8	X	261.84176	88.02412	279.67688	5.18550	0.0417514	0.22114505	2.7082239	20	6 20.5	20.2
342419 2008 UK ₇₂	16.9	X	330.20777	358.10225	25.24782	7.75542	0.2678852	0.24379703	2.5377594	20	10 28.3	18.2
342420 2008 UM ₇₂	16.2	X	329.98624	349.24886	5.94594	5.64565	0.2610418	0.23934855	2.5691069	20	9 7.8	17.9
342421 2008 UW ₇₃	16.4	X	252.67423	7.97741	5.62460	6.41038	0.1061080	0.22196431	2.7015559	20	6 6.2	20.3
342422 2008 US ₇₅	16.0	X	217.97467	250.60574	248.14714	12.41647	0.1318067	0.23752855	2.5822136	20	10 2.6	20.0
342423 2008 UG ₇₆	16.8	X	330.49582	346.28071	18.08844	3.38138	0.1957456	0.23953030	2.5678072	20	9 25.7	18.9
342424 2008 UB ₇₇	17.0	X	269.73467	145.07357	283.24641	1.63127	0.1965218	0.23611116	2.5925374	20	8 29.7	20.0
342425 2008 UP ₇₇	16.4	X	23.73443	64.93759	242.06159	13.60291	0.1819138	0.23960218	2.5672936	20	10 12.9	19.6
342426 2008 UA ₈₀	17.2	X	1.98909	283.00941	26.56576	10.45495	0.2042529	0.23922191	2.5700135	20	9 17.6	19.6
342427 2008 UM ₈₄	16.5	X	320.91905	270.77315	23.24104	10.09822	0.1543191	0.22540865	2.6739647	20	5 16.9	19.6
342428 2008 UG ₈₇	16.9	X	329.22441	257.58758	64.94240	4.17377	0.1916708	0.23132905	2.6281446	20	7 15.2	19.3
342429 2008 UP ₈₇	16.8	X	305.87373	302.59709	99.98184	4.14039	0.1492994	0.24201081	2.5502311	20	10 6.3	19.4
342430 2008 UN ₈₉	17.4	X	324.02491	41.84963	266.92243	2.42480	0.2446464	0.23444697	2.6046434	20	6 2.7	19.6
342431 Hilo	16.3	X	280.58127	147.86720	223.62398	11.70456	0.2739603	0.23238403	2.6201844	20	6 14.6	19.9
342432 2008 UC ₉₁	16.1	X	243.25382	298.83487	71.14537	15.22609	0.2590165	0.22190876	2.7020067	20	5 10.4	20.7
342433 2008 UO ₉₂	16.2	X	263.01498	266.97068	82.91997	8.93401	0.1353401	0.22449026	2.6812525	20	5 17.1	20.0
342434 2008 UE ₉₃	16.2	X	339.41089	199.58699	113.17480	7.23394	0.1406572	0.23457727	2.6038268	20	7 25.7	18.7
342435 2008 UL ₉₃	16.5	X	222.20450	233.07093	198.05658	14.80767	0.2200164	0.22661053	2.6645017	20	7 5.3	21.2
342436 2008 UT ₉₃	16.2	X	260.08622	240.06375	180.61068	10.09374	0.1655148	0.23289870	2.6163229	20	8 8.8	20.0
342437 2008 UA ₉₄	16.6	X	262.02701	239.72285	175.73776	7.71503	0.1786372	0.23310966	2.6147442	20	8 2.9	20.2
342438 2008 UH ₉₄	16.5	X	199.14455	252.31768	199.82777	12.37935	0.2375586	0.22253407	2.6964926	20	7 10.6	21.3
342439 2008 UN ₉₄	16.5	X	252.00207	3.20158	78.29768	15.47652	0.2321954	0.23377599	2.6097732	20	8 25.9	20.5
342440 2008 UR ₉₄	16.9	X	277.64881	93.06385	296.08561	2.33159	0.1142868	0.23181988	2.6244337	20	7 31.1	20.0
342441 2008 UR ₉₅	17.1	X	294.24405	75.36047	36.65471	6.55540	0.1545900	0.25360756	2.4718830	20	12 26.2	19.5
342442 2008 UY ₉₅	16.6	X	347.34769	128.51622	181.48249	7.62944	0.1254897	0.23672847	2.5880285	20	8 4.5	19.4
342443 2008 UE ₉₈	16.2	X	267.94347	347.46801	66.46121	15.56952	0.1242137	0.23459649	2.6036846	20	8 27.6	19.9
342444 2008 UJ ₉₈	16.7	X	306.02094	286.38577	126.44626	3.98301	0.2141732	0.24324237	2.5416158	20	10 15.7	18.8
342445 2008 UR ₉₈	16.0	X	350.51989	265.89450	94.30490	8.87221	0.2010835	0.24411722	2.5355399	20	11 9.6	18.4
342446 2008 UU ₉₈	16.6	X	290.90233	309.07443	56.49278	19.49265	0.2618957	0.23294814	2.6159527	20	6 20.9	20.0
342447 2008 UA ₉₉	16.6	X	225.49887	53.95136	346.64259	8.38782	0.1236305	0.22473647	2.6792939	20	6 8.5	20.8
342448 2008 UA ₁₀₀	16.9	X	253.26355	190.60309	221.92372	3.68319	0.2118769	0.23150330	2.6268257	20	7 15.1	20.7
342449 2008 UE ₁₀₁	16.9	X	122.18869	251.41478	330.33606	2.95631	0.1583684	0.24502279	2.5292887	20	10 16.2	21.0
342450 2008 UF ₁₁₀	16.9	X	83.33034	264.02565	293.38892	4.66968	0.1299648	0.22525904	2.6751485	20	7 31.6	20.5
342451 2008 US ₁₁₀	16.5	X	303.93642	51.57283	242.90392	9.39268	0.0986626	0.21952274	2.7215504	20	4 30.4	20.1
342452 2008 UW ₁₁₀	17.1	X	37.91620	336.56667	358.24930	5.85203	0.1379881	0.25187569	2.4832010	20	12 7.8	20.4
342453 2008 UA ₁₁₁	16.4	X	279.48280	137.10285	241.44191	8.82080	0.1016805	0.23160793	2.6260345	20	7 18.7	19.9
342454 2008 UG ₁₁₁	16.7	X	125.88520	244.73011	268.13846	4.61226	0.0779467	0.22375457	2.6871265	20	7 16.9	20.6
342455 2008 UA ₁₁₂	16.9	X	257.44763	190.36152	11.37822	7.23273	0.0490647	0.26888806	2.3773240	20	—	—
342456 2008 UP ₁₁₂	16.4	X	250.98573	174.92735	284.69245	3.33844	0.0726806	0.24206577	2.5498451	20	10 4.6	19.8
342457 2008 UQ ₁₁₂	17.4	X	341.42430	334.88226	329.73608	3.11024	0.1950737	0.23358380	2.6112046	20	7 15.2	19.5
342458 2008 UF ₁₁₅	16.7	X	161.58286	154.42277	11.65294	9.58036	0.1270281	0.23377919	2.6097494	20	9 15.7	20.8
342459 2008 UO ₁₁₅	17.2	X	158.00265	188.09655	12.72276	9.53349	0.0335487	0.24381787	2.5376148	20	10 25.7	20.8
342460 2008 UE ₁₁₆	17.1	X	297.56604	58.67791	334.64865	4.53536	0.0882789	0.23787719	2.5796900	20	9 10.5	20.0
342461 2008 UH ₁₁₉	16.7	X	224.31095	8.28846	351.97079	4.32174	0.0803757	0.21384578	2.7695057	20	4 19.6	20.9
342462 2008 UH ₁₂₁	16.2	X	314.83417	42.96706	291.85495	7.15545	0.0015190	0.22640549	2.6661101	20	7 24.2	19.7
342463 2008 UK ₁₂₂	16.0	X	11.74895	255.09929	27.71869	14.56278	0.1893787	0.23221189	2.6214792	20	8 28.8	18.9
342464 2008 UY ₁₂₂	16.7	X	299.12471	28.69015	320.27937	4.56809	0.2629317	0.23230574	2.6207731	20	6 11.9	19.7
342465 2008 UB ₁₂₃	17.2	X	325.95759	324.56859	5.39500	6.14200	0.3160848	0.23651952	2.5895525	20	7 1.5	19.0
342466 2008 UC ₁₂₃	16.4	X	251.20993	146.71847	261.14456	8.15549	0.1719242	0.22887998	2.6468592	20	7 11.4	20.2
342467 2008 UD ₁₂₄	16.4	X	294.45826	29.14164	300.55729	8.31779	0.1727483	0.22478651	2.6788962	20	5 22.4	19.9
342468 2008 UU ₁₂₄	16.0	X	319.98603	357.36284	23.17687	14.00226	0.1923412	0.24064631	2.5598622	20	9 29.9	18.2
342469 2008 UH ₁₂₅	16.3	X	202.33770	64.56095	23.84485	12.61483	0.1437187	0.22341956	2.6898120	20	7 18.8	20.8
342470 2008 UM ₁₂₆	16.4	X	156.09808	127.77012	323.79970	3.73961	0.0900312	0.21320450	2.7750564	20	6 1.6	20.5
342471 2008 UU ₁₂₇	16.7	X	314.15717	128.78938	213.44421	3.88554	0.1440897	0.22954033	2.6417804	20	7 18.2	19.7
342472 2008 UE ₁₂₉	16.9	X	326.72496	24.88094	276.14649	3.01887	0.2833458	0.23215727	2.6218903	20	5 20.1	19.3
342473 2008 UB ₁₃₇	17.5	X	237.63654	246.47191	219.73189	4.10549	0					

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342481 2008 UG ₁₄₈	17.1	X	301.66980	25.91090	45.83220	4.68000	0.0723421	0.24556516	2.5255631	20	11 13.7	20.0
342482 2008 UX ₁₄₈	17.2	X	267.61625	327.52648	30.65372	1.71635	0.1091692	0.22253361	2.6969463	20	6 4.8	20.8
342483 2008 UP ₁₅₀	17.1	X	148.44816	129.34168	122.60032	2.05997	0.1571750	0.25934012	2.4353212	20	12 19.2	20.8
342484 2008 UG ₁₅₁	15.9	X	339.14429	200.54892	51.07096	9.29654	0.1789272	0.21379580	2.7699373	20	4 21.4	18.7
342485 2008 UN ₁₅₃	17.4	X	311.13840	213.87919	185.90527	2.33536	0.0375665	0.24499020	2.5295129	20	10 17.4	20.5
342486 2008 UC ₁₅₈	16.3	X	347.52784	137.80788	217.24540	5.94578	0.1691386	0.24259235	2.5461539	20	10 18.2	18.5
342487 2008 UP ₁₅₈	15.9	X	359.25873	346.49813	275.40820	13.09481	0.0934139	0.21805434	2.7337548	20	6 16.5	19.1
342488 2008 UW ₁₅₈	16.2	X	310.55087	68.16368	282.66741	7.52198	0.2078159	0.23291217	2.6162220	20	7 15.7	18.8
342489 2008 UV ₁₅₉	16.7	X	11.31178	305.46300	26.42838	4.74640	0.2739829	0.24444697	2.5332591	20	11 16.0	19.4
342490 2008 UM ₁₆₀	16.9	X	272.90081	336.70399	42.05153	3.53714	0.1716157	0.22760381	2.6567439	20	6 30.7	20.3
342491 2008 UK ₁₆₂	16.4	X	342.31368	349.50225	299.52188	2.95284	0.1816154	0.23048024	2.6345933	20	6 21.8	18.6
342492 2008 UM ₁₆₃	16.6	X	297.46287	95.51567	245.86150	4.31296	0.1353474	0.22998634	2.6383639	20	6 20.4	19.6
342493 2008 UB ₁₆₆	17.4	X	322.49799	156.59904	198.69170	1.86655	0.1221724	0.23752260	2.5822568	20	8 26.4	20.1
342494 2008 UW ₁₆₉	16.9	X	336.77304	179.65687	248.86870	5.53043	0.1148597	0.25769195	2.4456941	20	—	—
342495 2008 UD ₁₇₀	16.4	X	208.91908	102.36373	288.99923	3.80264	0.1275739	0.22023545	2.7156757	20	5 10.0	20.8
342496 2008 UQ ₁₇₁	16.7	X	263.12098	330.33127	25.58372	4.69634	0.0707818	0.22130633	2.7069080	20	6 1.0	20.3
342497 2008 UM ₁₇₂	17.0	X	306.55640	59.41385	235.02310	6.11209	0.0277968	0.21639132	2.7477433	20	5 14.3	20.5
342498 2008 UQ ₁₇₂	17.0	X	306.07205	79.98370	263.42942	2.08125	0.2837298	0.23394081	2.6085473	20	6 12.3	19.6
342499 2008 UD ₁₇₃	16.5	X	295.82095	256.93875	44.87375	4.29842	0.1906760	0.22007207	2.7170196	20	4 16.3	20.0
342500 2008 UJ ₁₇₃	16.2	X	350.56229	41.28867	237.40300	12.78080	0.1624789	0.23154494	2.6265107	20	6 23.6	18.8
342501 2008 UT ₁₇₄	16.1	X	36.91656	204.31375	349.37890	12.39981	0.0485517	0.21717891	2.7410962	20	5 4.1	19.8
342502 2008 UM ₁₇₆	17.5	X	3.69087	299.32194	29.22369	13.66588	0.2599676	0.24599669	2.5226086	20	10 26.1	19.8
342503 2008 UE ₁₈₁	16.7	X	77.56722	353.85922	210.38668	11.35354	0.0570089	0.22723653	2.6596059	20	7 19.9	20.6
342504 2008 UB ₁₈₃	16.8	X	108.84447	93.16093	62.40247	5.18912	0.0354243	0.22318036	2.6917735	20	6 24.9	20.4
342505 2008 UM ₁₈₃	16.5	X	272.27092	262.40385	50.64953	9.75092	0.1366784	0.21877312	2.7277637	20	4 11.7	20.4
342506 2008 UL ₁₈₅	16.3	X	213.20339	309.44333	67.09455	5.79152	0.0323513	0.21178415	2.7874500	20	5 3.4	20.1
342507 2008 UP ₁₈₅	16.5	X	159.05759	140.77963	59.42000	10.64105	0.0945614	0.23985691	2.5654757	20	10 28.1	20.3
342508 2008 UW ₁₈₅	17.4	X	257.54146	246.32996	208.40796	2.35959	0.1218363	0.23822935	2.5771471	20	9 29.7	20.5
342509 2008 UC ₁₈₆	17.3	X	351.02524	278.52310	62.48011	2.04549	0.1774587	0.24125764	2.5555360	20	10 6.2	19.6
342510 2008 UH ₁₈₆	16.9	X	280.22689	125.49289	232.27776	5.90753	0.1624854	0.22205323	2.7008346	20	7 3.8	20.5
342511 2008 UQ ₁₈₆	17.1	X	354.49104	139.02084	193.51897	3.65033	0.0278837	0.23382326	2.6094216	20	9 15.4	20.4
342512 2008 UE ₁₉₁	17.4	X	337.23148	268.77411	83.86637	3.33244	0.1411880	0.24193017	2.5507978	20	9 24.1	19.8
342513 2008 UF ₁₉₁	16.6	X	138.46740	159.59491	45.27399	13.96224	0.0854334	0.24227118	2.5484036	20	10 14.1	20.4
342514 2008 UE ₁₉₇	17.2	X	328.81581	201.81733	151.81281	3.11712	0.1756703	0.23928983	2.5695272	20	9 4.5	19.4
342515 2008 UL ₁₉₈	16.9	X	229.85201	184.21273	170.48527	3.82493	0.2084832	0.21798284	2.7343526	20	4 11.9	21.3
342516 2008 UA ₁₉₉	16.8	X	291.81345	189.92436	168.63463	2.41400	0.2935566	0.23231657	2.6206917	20	6 9.5	20.2
342517 2008 UM ₁₉₉	15.1	X	86.57498	247.69261	113.93300	28.10166	0.2618618	0.17202113	3.2019523	20	—	—
342518 2008 UY ₁₉₉	16.4	X	147.86685	127.22414	323.45872	5.59597	0.0649943	0.21384281	2.7695313	20	5 18.2	20.5
342519 2008 UA ₂₀₁	17.0	X	306.27651	111.24373	270.59619	4.55427	0.2595175	0.24027948	2.5624669	20	8 14.9	19.3
342520 2008 UW ₂₀₁	16.0	X	283.24877	209.93324	224.47940	14.12708	0.0659421	0.24128339	2.5553541	20	10 17.9	19.3
342521 2008 UA ₂₀₃	16.8	X	284.29553	112.42475	279.30185	5.61440	0.1426327	0.23669941	2.5882403	20	8 8.3	20.0
342522 2008 UX ₂₀₃	15.8	X	226.41881	165.23450	243.88706	11.90826	0.1334155	0.22500821	2.6771363	20	6 20.1	19.8
342523 2008 UK ₂₀₄	15.9	X	38.33918	261.53448	24.57258	9.26788	0.1688096	0.23994170	2.5648712	20	10 8.9	18.9
342524 2008 UQ ₂₀₄	15.8	X	240.01218	150.63758	235.52501	12.82308	0.1816603	0.22667182	2.6640213	20	5 31.7	19.8
342525 2008 UG ₂₀₅	17.0	X	310.13300	283.07706	88.19039	18.57781	0.2307985	0.24055975	2.5604762	20	8 20.9	19.7
342526 2008 UZ ₂₀₅	18.0	X	328.20836	150.71267	229.36646	8.38729	0.2529329	0.24472114	2.5313666	20	10 15.0	19.7
342527 2008 UH ₂₀₆	16.9	X	224.09380	263.24643	181.71393	14.49445	0.2419135	0.23071978	2.6327694	20	7 22.5	21.4
342528 2008 UW ₂₀₈	16.8	X	288.00102	50.57343	309.75739	1.56347	0.1918608	0.23152859	2.6266345	20	6 23.3	19.9
342529 2008 UH ₂₀₉	16.8	X	279.76681	145.13309	255.99742	1.86065	0.1197398	0.23595616	2.5936727	20	8 19.1	19.8
342530 2008 UK ₂₁₄	16.8	X	265.57240	43.30005	7.14056	11.55515	0.1926135	0.23492420	2.6012627	20	8 5.1	20.4
342531 2008 UB ₂₁₅	16.5	X	283.37166	315.93701	12.63452	12.09324	0.2076225	0.22578994	2.6709535	20	4 28.6	20.4
342532 2008 UF ₂₁₆	16.8	X	221.17682	259.54414	235.59510	2.65370	0.2161967	0.23551813	2.5968876	20	9 25.4	20.9
342533 2008 UU ₂₁₇	16.9	X	82.50633	275.12801	294.43136	3.36130	0.0649706	0.22811289	2.6527898	20	8 6.7	20.5
342534 2008 UE ₂₁₈	17.3	X	324.70725	312.88221	5.35132	4.32701	0.1129544	0.22930280	2.6436044	20	7 7.3	20.3
342535 2008 UO ₂₁₈	16.3	X	351.43379	72.54435	259.82255	3.70760	0.1207354	0.23900120	2.5715955	20	9 15.3	19.1
342536 2008 UQ ₂₁₈	17.0	X	281.31188	354.19497	0.70587	2.94752	0.1181843	0.22685108	2.6626177	20	6 17.7	20.5
342537 2008 UR ₂₁₉	17.2	X	332.81525	348.88310	320.16528	1.89325	0.0874075	0.22834494	2.6509923	20	7 9.6	20.3
342538 2008 UT ₂₂₀	16.7	X	93.81470	282.16960	297.08680	1.68849	0.0162790	0.23300797	2.6155049	20	8 28.3	20.3
342539 2008 UR ₂₂₂	16.6	X	320.31108	289.74694	30.89224	13.06603	0.2889559	0.23309952	2.6148200	20	6 2.1	19.2
342540 2008 UA ₂₂₃	16.5	X	112.52106	138.43039	351.36315	3.52780	0.0242388	0.21526305	2.7573362	20	5 23.5	20.2
342541 2008 UC ₂₂₃	16.5	X	312.35998	293.15296	338.40461	3.71688	0.0224814	0.21198609	2.7856795	20	4 22.3	20.2
342542 2008 UY ₂₂₅	15.8	X	303.46014	83.60622	272.81703	12.96621	0.0994310	0.23448137	2.6045367	20	7 24.6	19.0
342543 2008 UC ₂₂₇	16.3	X	137.67180	83.26215	41.79749	9.31288	0.0717364	0.21655814	2.7463320	20	6 23.5	20.4
342544 2008 UD ₂₂₇	16.8	X	22.90833	280.78648	316.17722	2.37270	0.0344439	0.21761484	2.7374343	20	6 16.1	20.3
342545 2008 US ₂₂₇	16.7	X	261.40287	345.30599	30.62781	6.38897	0.0566063	0.22255722	2.6967556	20	6 29.1	20.5
342546 2008 UG ₂₂₈	16.4	X	337.79996	258.23572	23.74146	4.03702	0.0870461	0.21970828	2.7200180	20	6 7.8	19.7
342547 2008 UR ₂₃₀	15.9	X	234.38899	215.66550	206.85933	21.52128	0.0502055	0.23429756	2.6058987	20	7 22.4	20.0
342548 2008 US ₂₃₂	17.1	X	74.71743	315.07776	313.85285	1.02129	0.1287915	0.24525875	2.5276661	20	10 25.7	20.7
342549 2008 UM ₂₃₃	16.9	X	155.38708	132.96527	338.74100	5.11766	0.0311693	0.22167031	2.7039441	20	6 25.5	20.7
342550 2008 UO ₂₃₆	16.2	X	186.45819	119.33915	20.89251	11.61486	0.1259571	0.23377414	2.6097871	20	9 10.2	20.3
342551 2008 UA ₂₃₉	16.9	X	201.33957	50.80266	328.68966	5.46483	0.0267588	0.21200238	2.7855368	20	4 19.3	21.0
342552 2008 UV ₂₄₀	16.6	X	260.14798	81.35754	298.82287	4.42288	0.1395951	0.22624501	2.6675355	20	6 20.8	20.2
342553 2008 UW ₂₄₁												

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
342561	2008	UL ₂₅₀	17.4	X	159.69818	226.84466	293.51704	1.12866	0.0439570	0.23452022	2.6042491	20	9 4.5	21.1
342562	2008	UB ₂₅₁	16.8	X	131.01700	175.09545	334.29129	0.66442	0.0902736	0.22319510	2.6916151	20	7 19.9	20.8
342563	2008	UG ₂₅₁	16.7	X	216.29265	243.60764	224.81051	12.41582	0.2302885	0.23141766	2.6274738	20	8 12.6	21.2
342564	2008	US ₂₅₁	16.5	X	60.50701	181.90878	38.84293	6.15357	0.0233005	0.22548149	2.6733888	20	7 18.2	20.1
342565	2008	UP ₂₅₂	17.3	X	231.41876	91.70238	47.31938	6.92638	0.1692067	0.24301276	2.5432165	20	10 20.7	20.7
342566	2008	UM ₂₅₄	16.9	X	307.47166	142.81614	215.60246	2.91031	0.2169492	0.23541202	2.5976679	20	7 19.5	19.6
342567	2008	UW ₂₅₄	16.8	X	318.20623	114.67577	224.62143	6.01661	0.1745314	0.23336843	2.6128109	20	7 17.4	19.6
342568	2008	UX ₂₅₅	16.5	X	281.24841	321.34335	50.75832	3.28211	0.2175211	0.23110816	2.6298191	20	6 25.6	19.9
342569	2008	UY ₂₅₅	16.5	X	190.51584	39.85806	64.16625	3.70240	0.0094772	0.22849206	2.6498542	20	8 1.3	20.0
342570	2008	UZ ₂₅₇	16.0	X	184.15638	252.60268	236.35925	12.00376	0.2003574	0.22686630	2.6624986	20	8 11.5	20.7
342571	2008	UH ₂₅₉	17.4	X	314.22699	281.81387	56.03382	4.41699	0.2529215	0.23341725	2.6124466	20	6 25.9	19.9
342572	2008	UI ₂₅₉	16.4	X	157.40909	32.48405	51.32519	6.57538	0.0208498	0.21427781	2.7657818	20	5 20.5	20.3
342573	2008	UJ ₂₆₁	16.9	X	1.09017	70.11690	219.59295	12.83353	0.1290024	0.22932524	2.6434320	20	7 28.1	20.1
342574	2008	UK ₂₆₂	16.5	X	294.16807	65.33164	301.10515	6.96228	0.2143941	0.23146190	2.6271389	20	7 8.4	19.6
342575	2008	UL ₂₆₄	16.6	X	328.89883	16.59821	28.37226	5.97045	0.0164167	0.26174921	2.4203554	20	11 21.3	19.5
342576	2008	UM ₂₆₄	17.1	X	205.99426	113.48503	291.84555	3.88596	0.0520376	0.21988851	2.7185314	20	5 29.4	21.1
342577	2008	UN ₂₆₆	16.8	X	224.45623	117.46516	335.88455	2.25334	0.1802736	0.23300262	2.6155449	20	8 19.0	20.3
342578	2008	UO ₂₆₆	17.1	X	324.19465	321.10874	22.02286	5.21367	0.1920386	0.23685799	2.5870850	20	8 8.4	19.5
342579	2008	UP ₂₆₇	16.9	X	306.66395	270.99708	44.59497	12.29752	0.3181453	0.23112674	2.6296781	20	4 28.9	20.1
342580	2008	UQ ₂₆₈	17.4	X	324.16109	174.00302	189.52567	1.46910	0.0692140	0.23856369	2.5747387	20	9 13.8	20.3
342581	2008	UR ₂₆₉	16.8	X	219.81576	81.15669	48.81787	22.31656	0.1294636	0.23894150	2.5720238	20	10 9.4	20.8
342582	2008	US ₂₇₀	16.6	X	204.34845	230.29258	208.45405	13.51194	0.1359214	0.23111713	2.6297509	20	7 3.9	20.9
342583	2008	UT ₂₇₃	16.2	X	286.93837	119.09302	243.75472	13.01673	0.2069382	0.23316501	2.6143304	20	6 21.8	19.5
342584	2008	UU ₂₇₇	16.9	X	262.25861	45.23148	37.56295	4.64195	0.1458422	0.24015036	2.5633853	20	9 19.5	20.0
342585	2008	UV ₂₇₈	17.2	X	320.90855	273.97316	50.52014	3.83125	0.1287302	0.23185674	2.6241555	20	7 7.7	20.1
342586	2008	UW ₂₇₉	17.1	X	346.05175	117.25135	212.68312	7.61923	0.1788263	0.24000164	2.5644442	20	9 3.0	19.5
342587	2008	UX ₂₈₃	17.4	X	271.26757	165.73626	228.32909	4.13702	0.2826942	0.23138773	2.6277003	20	7 2.1	21.0
342588	2008	UY ₂₈₈	17.7	X	268.60893	276.27578	185.31981	3.98818	0.1703535	0.24476406	2.5310707	20	10 20.8	20.4
342589	2008	UZ ₂₈₉	16.7	X	182.63548	251.09595	211.18017	4.18649	0.1172011	0.22077243	2.7112703	20	7 13.6	20.9
342590	2008	UH ₂₉₂	16.9	X	185.20522	171.25935	239.35003	4.18065	0.0594508	0.21568983	2.7536977	20	5 12.0	20.7
342591	2008	UI ₃₀₀	16.6	X	317.47163	266.33578	8.00908	4.29876	0.0828371	0.21444953	2.7643052	20	4 25.7	20.1
342592	2008	UJ ₃₀₀	16.2	X	220.59846	18.57331	95.25475	8.54784	0.1586473	0.23809375	2.5781255	20	9 9.2	20.1
342593	2008	UK ₃₀₁	16.7	X	355.58438	341.68327	340.31086	4.51553	0.1087368	0.23564598	2.5959482	20	9 8.1	19.2
342594	2008	UL ₃₀₂	17.1	X	175.73073	146.01487	27.80509	5.74609	0.1838493	0.23460818	2.6035982	20	10 5.8	21.4
342595	2008	UM ₃₀₂	16.9	X	149.26988	305.65868	276.31153	3.30344	0.0379162	0.24417287	2.5351546	20	11 12.6	20.4
342596	2008	UN ₃₀₂	17.9	X	266.97647	112.96636	341.13360	1.96534	0.2619461	0.23919687	2.5701929	20	9 20.4	20.9
342597	2008	UO ₃₀₃	17.1	X	231.21094	68.81677	33.10322	4.36640	0.1220654	0.23332139	2.6131621	20	9 7.4	20.9
342598	2008	UP ₃₀₈	16.2	X	223.00252	109.43226	14.85223	9.96952	0.0025167	0.24077568	2.5589451	20	10 12.1	19.5
342599	2008	UQ ₃₀₈	16.5	X	356.41903	323.44235	354.16276	6.55079	0.1498044	0.23662927	2.5887518	20	9 7.7	19.1
342600	2008	UR ₃₁₀	16.1	X	328.18174	114.76105	239.27503	21.13390	0.0665618	0.23907745	2.5710487	20	8 27.3	19.8
342601	2008	US ₃₁₃	16.3	X	333.67738	352.23901	302.53977	4.49403	0.2912126	0.23322427	2.6138875	20	5 25.6	18.3
342602	2008	UT ₃₁₅	16.7	X	317.50372	91.60363	233.77177	4.68528	0.2061676	0.22857012	2.6492509	20	6 20.9	19.2
342603	2008	UU ₃₁₅	16.7	X	215.90438	345.14339	61.67659	9.57626	0.2162888	0.21926076	2.7237178	20	5 31.9	21.1
342604	2008	UV ₃₂₀	16.6	X	201.12854	181.49037	325.38976	2.55947	0.1888236	0.24037718	2.5617725	20	9 24.1	20.7
342605	2008	UW ₃₂₁	17.1	X	195.64558	132.56902	7.49815	7.57331	0.1307274	0.23853202	2.5749666	20	9 16.4	21.0
342606	2008	UX ₃₂₂	17.1	X	131.87593	141.39803	342.22259	4.80831	0.0020954	0.22285865	2.6943234	20	6 7.5	20.8
342607	2008	UY ₃₂₂	17.1	X	339.22387	83.63781	223.06589	23.99218	0.2483898	0.23690730	2.5867260	20	7 2.1	19.7
342608	2008	UZ ₃₂₃	15.9	X	310.10139	60.93806	265.89884	10.31279	0.1895584	0.22982536	2.6395958	20	6 11.8	18.6
342609	2008	UH ₃₂₄	16.9	X	195.27981	230.31139	270.60511	4.40762	0.1563972	0.23158139	2.6262351	20	9 10.9	21.0
342610	2008	UI ₃₂₅	16.2	X	192.25267	141.15508	282.82931	9.50277	0.0541325	0.22193319	2.7018084	20	6 6.8	20.2
342611	2008	UJ ₃₂₇	15.6	X	300.77017	242.01566	139.27006	31.02552	0.2679178	0.23684192	2.5872020	20	8 2.1	18.2
342612	2008	UK ₃₂₇	15.6	X	154.95714	274.40236	214.87407	21.36262	0.0234181	0.22731888	2.6589635	20	7 12.8	19.8
342613	2008	UL ₃₃₁	16.4	X	225.54527	34.99755	22.96507	15.53401	0.1999660	0.22486774	2.6782510	20	6 24.9	21.0
342614	2008	UM ₃₃₅	16.2	X	136.75299	156.80123	355.65192	8.85957	0.0270838	0.22464838	2.6799942	20	8 1.1	20.2
342615	2008	UN ₃₃₆	16.2	X	55.19999	283.40214	57.76270	1.92408	0.1654646	0.17166542	3.2063739	20	12 21.8	20.8
342616	2008	UO ₃₃₈	16.7	X	155.90394	195.03135	336.39944	4.66856	0.0814675	0.23282628	2.6168654	20	9 13.9	20.6
342617	2008	UP ₃₃₉	17.0	X	185.50470	270.37277	254.60666	2.50533	0.0393952	0.24246288	2.5470602	20	10 12.9	20.5
342618	2008	UQ ₃₃₉	16.9	X	306.65672	266.95057	63.53121	4.44330	0.2191337	0.23026980	2.6361982	20	6 5.7	19.8
342619	2008	UR ₃₄₀	16.2	X	12.01072	319.47251	15.98277	13.84230	0.1054328	0.24561177	2.5252435	20	10 24.5	19.2
342620	2008	Beita	16.0	X	44.88713	183.75572	174.12011	6.99395	0.1994726	0.17234206	3.1979760	20	—	—
342621	2008	US ₃₄₁	17.1	X	4.89439	123.91084	216.32260	2.76635	0.2271962	0.24375475	2.5380529	20	11 9.3	19.4
342622	2008	UT ₃₄₁	16.7	X	328.58568	246.12242	55.32410	3.97409	0.0591244	0.22313837	2.6920712	20	6 23.3	19.9
342623	2008	UU ₃₄₂	16.5	X	253.80814	311.85775	31.02449	6.71926	0.0063776	0.21454835	2.7634563	20	5 11.6	20.1
342624	2008	UV ₃₄₂	17.5	X	26.64691	202.18739	75.71317	2.49634	0.1185236	0.23555862	2.5965900	20	8 31.9	20.4
342625	2008	UW ₃₄₂	16.6	X	324.38169	98.31677	211.95805	4.74548	0.0475717	0.22656144	2.6648865	20	6 29.9	20.1
342626	2008	UX ₃₄₃	16.3	X	272.25628	283.11461	138.04677	9.73796	0.0818767	0.23687879	2.5869335	20	9 14.4	19.5
342627	2008	UY ₃₄₃	16.6	X	176.95441	122.51368	21.21027	13.18024	0.2049099	0.22895099	2.6463120	20	9 3.4	21.2
342628	2008	UZ ₃₄₄	16.3	X	151.09788	109.86727	66.37376	14.98269	0.1460596	0.22953691	2.6418066	20	9 24.4	20.8
342629	2008	UH ₃₄₆	16.6	X	259.81161	255.73900	111.22517	9.86925						

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342641 2008 <i>UM</i> ₃₅₆	17.1	X	301.15391	290.04649	45.62435	13.77635	0.2768093	0.23154669	2.6264976	20	5 23.1	20.2
342642 2008 <i>UA</i> ₃₅₈	17.5	X	300.41172	4.51658	342.58419	1.52036	0.2117772	0.22953034	2.6418570	20	6 20.7	20.3
342643 2008 <i>UG</i> ₃₆₀	16.3	X	356.48722	298.53216	261.83569	11.30276	0.0933971	0.20236869	2.8732528	20	3 12.3	20.0
342644 2008 <i>UZ</i> ₃₆₃	15.8	X	342.37444	0.57519	321.88568	15.01633	0.0440966	0.23428609	2.6059838	20	8 15.3	19.0
342645 2008 <i>UV</i> ₃₆₄	16.0	X	261.00300	259.24756	57.39257	9.76056	0.1456688	0.21880318	2.7275139	20	4 3.7	20.1
342646 2008 <i>UE</i> ₃₆₇	16.7	X	246.68222	285.87417	124.55455	6.75279	0.1508409	0.23037513	2.6353946	20	7 13.2	20.4
342647 2008 <i>UM</i> ₃₆₈	16.3	X	170.69719	256.80179	166.16653	12.35065	0.1766215	0.21155785	2.7894374	20	5 17.3	21.1
342648 2008 <i>UP</i> ₃₆₉	15.8	X	313.53578	241.81373	111.89377	12.64386	0.2131344	0.23328366	2.6134438	20	7 26.7	18.3
342649 2008 <i>UP</i> ₃₇₀	16.6	X	34.00673	293.04653	279.32194	6.84596	0.0437170	0.21235886	2.7824186	20	5 29.9	20.3
342650 2008 <i>VQ</i> ₁	15.8	X	346.92851	311.47097	20.52760	9.70235	0.0976362	0.23693861	2.5864981	20	9 11.2	18.7
342651 2008 <i>VR</i> ₁	16.7	X	349.52540	27.43471	292.83014	5.08656	0.3132674	0.24073935	2.5592025	20	9 7.6	18.1
342652 2008 <i>VW</i> ₂	16.3	X	335.91020	306.45756	15.60646	5.48229	0.2831803	0.23490916	2.6013738	20	7 25.9	17.9
342653 2008 <i>VG</i> ₃	15.7	X	350.82532	49.43792	258.72035	13.94365	0.1241123	0.23443717	2.6048641	20	8 3.9	18.7
342654 2008 <i>VJ</i> ₃	16.3	X	237.62527	100.10124	6.51120	11.75326	0.0811924	0.23967952	2.5667413	20	9 26.8	19.8
342655 2008 <i>VO</i> ₃	16.5	X	305.27679	136.45529	237.45084	27.91934	0.1615806	0.23729260	2.5839251	20	8 3.3	20.2
342656 2008 <i>VV</i> ₃	16.7	X	310.74153	41.96329	332.23719	6.34050	0.1137400	0.23871337	2.5736622	20	9 2.8	19.4
342657 2008 <i>VW</i> ₃	17.0	X	215.18768	103.80786	348.31187	6.75303	0.2552885	0.22801185	2.6535734	20	7 26.8	21.5
342658 2008 <i>VC</i> ₄	16.6	X	221.10030	101.07831	11.40108	2.60285	0.1417557	0.23640613	2.5903805	20	9 6.3	20.4
342659 2008 <i>VP</i> ₄	16.3	X	247.26325	91.14063	296.94582	4.30845	0.1084232	0.22813741	2.6525996	20	6 19.8	20.2
342660 2008 <i>VW</i> ₄	16.4	X	235.83336	317.55661	72.01762	12.81066	0.2013026	0.22353081	2.6889194	20	5 30.2	20.8
342661 2008 <i>VK</i> ₆	16.2	X	40.11997	174.36566	104.44187	15.00192	0.0465086	0.23396627	2.6083581	20	9 17.4	19.8
342662 2008 <i>VR</i> ₁₀	16.8	X	344.86325	82.59846	210.80651	12.12558	0.2635167	0.23088274	2.6315305	20	6 28.9	19.0
342663 2008 <i>VB</i> ₁₂	16.3	X	201.15871	176.30286	200.62932	8.05875	0.2000808	0.21287931	2.7778817	20	4 14.6	20.9
342664 2008 <i>VZ</i> ₁₂	15.9	X	142.21921	259.27023	251.52115	13.11166	0.0363033	0.22330814	2.6907066	20	7 26.9	19.9
342665 2008 <i>VB</i> ₁₃	17.0	X	194.54135	267.95129	239.38273	0.73693	0.0977672	0.23520387	2.5992003	20	9 25.2	20.8
342666 2008 <i>VC</i> ₁₃	16.7	X	251.07531	206.72942	202.88141	4.75383	0.2431202	0.22809541	2.6529253	20	7 4.9	20.8
342667 2008 <i>VM</i> ₁₃	16.5	X	330.09067	102.48296	164.77858	7.81321	0.1665617	0.24159765	2.5531378	20	9 24.3	19.1
342668 2008 <i>VZ</i> ₁₄	16.6	X	287.39506	281.23185	136.76165	4.19523	0.2105693	0.23825772	2.5769425	20	9 12.7	19.2
342669 2008 <i>VP</i> ₁₅	17.1	X	246.15736	189.75651	202.66466	1.47008	0.0904397	0.22645762	2.6657009	20	6 26.5	20.8
342670 2008 <i>VO</i> ₁₅	17.4	X	274.13659	141.36777	210.52174	2.82627	0.0821692	0.22489209	2.6780577	20	6 9.6	21.0
342671 2008 <i>VQ</i> ₁₆	17.4	X	19.99023	190.77660	86.66238	2.12956	0.1139289	0.23299773	2.6155815	20	8 18.5	20.4
342672 2008 <i>VY</i> ₂₅	17.0	X	205.55202	16.01581	106.31665	3.91415	0.1691789	0.23420731	2.6065681	20	8 31.6	21.0
342673 2008 <i>VD</i> ₃₁	17.2	X	342.63425	213.73414	82.68143	6.35575	0.2427614	0.23117910	2.6292810	20	6 30.9	18.9
342674 2008 <i>VE</i> ₃₅	16.2	X	218.17485	214.37926	231.96052	21.07276	0.0447297	0.22626349	2.6672255	20	7 31.1	20.4
342675 2008 <i>VU</i> ₃₅	16.0	X	244.48511	279.75620	10.11862	5.78168	0.0543639	0.19939803	2.9017198	20	2 21.3	20.2
342676 2008 <i>VD</i> ₃₆	16.7	X	252.50740	259.73493	198.65214	8.16970	0.1280843	0.23952177	2.5678682	20	9 26.9	20.1
342677 2008 <i>VC</i> ₃₈	15.9	X	232.84286	333.28613	66.93248	12.91113	0.1809116	0.22407764	2.6845430	20	6 10.7	20.0
342678 2008 <i>VV</i> ₃₈	17.0	X	253.34876	84.48485	33.56465	5.33810	0.1586055	0.24191102	2.5509324	20	10 23.4	20.1
342679 2008 <i>VL</i> ₃₉	16.8	X	250.78543	91.38211	301.13659	5.00765	0.0519011	0.22342050	2.6898044	20	7 8.3	20.5
342680 2008 <i>VN</i> ₄₁	16.3	X	275.75828	21.52020	12.46533	15.38488	0.1151247	0.23504370	2.6003809	20	8 11.9	19.9
342681 2008 <i>VT</i> ₄₆	17.4	X	270.30083	177.15246	216.63606	2.80043	0.2338589	0.23100012	2.6306390	20	7 7.7	21.1
342682 2008 <i>VT</i> ₅₀	16.5	X	301.39388	238.58459	126.81358	5.03775	0.3280831	0.23715693	2.5849105	20	6 28.3	19.3
342683 2008 <i>VW</i> ₅₂	16.9	X	341.50428	209.98031	226.62745	5.76290	0.1287820	0.25889861	2.4380891	20	—	—
342684 2008 <i>VB</i> ₅₃	17.3	X	265.46325	98.82936	253.62699	2.03720	0.1071267	0.22523579	2.6753326	20	5 25.8	20.9
342685 2008 <i>VL</i> ₅₃	16.5	X	276.88620	275.92165	113.09006	5.16291	0.1866270	0.23319103	2.6141359	20	7 18.2	19.9
342686 2008 <i>VX</i> ₅₇	16.6	X	280.03241	317.83884	97.43778	7.09788	0.0611961	0.23868891	2.5738381	20	9 22.6	19.9
342687 2008 <i>VL</i> ₅₉	16.2	X	321.35696	114.31477	225.59701	3.85348	0.1015851	0.23259189	2.6186231	20	8 1.4	19.1
342688 2008 <i>VZ</i> ₆₀	16.8	X	105.72290	281.95666	203.86503	4.33761	0.0678455	0.21214304	2.7843053	20	5 17.3	20.7
342689 2008 <i>VZ</i> ₆₁	16.8	X	290.18062	82.28891	225.95124	7.96027	0.1278398	0.21882239	2.7273542	20	4 25.7	20.4
342690 2008 <i>VK</i> ₆₄	16.0	X	297.96622	305.09678	119.35375	13.95865	0.1536481	0.24321376	2.5418151	20	10 28.2	18.9
342691 2008 <i>VQ</i> ₆₄	16.7	X	277.20020	36.27018	339.64441	3.45447	0.2634206	0.22947790	2.6422596	20	6 17.9	20.4
342692 2008 <i>VT</i> ₆₆	17.1	X	264.66926	141.72698	223.66459	5.32858	0.0845555	0.21926371	2.7236934	20	6 25.9	20.8
342693 2008 <i>VV</i> ₆₇	16.9	X	210.50470	231.69243	166.10208	0.36161	0.0737745	0.21522432	2.7576670	20	5 24.1	20.8
342694 2008 <i>VQ</i> ₆₉	16.7	X	209.69889	108.26408	226.48540	1.21613	0.0678519	0.20349980	2.8625960	20	3 5.3	20.9
342695 2008 <i>VD</i> ₇₁	16.1	X	175.45519	200.63384	271.78480	13.41065	0.1315088	0.22146197	2.7056396	20	7 17.9	20.5
342696 2008 <i>VR</i> ₇₁	16.4	X	261.62260	323.89039	103.50887	6.42423	0.2007762	0.22931622	2.6435013	20	8 18.2	20.0
342697 2008 <i>VS</i> ₇₁	16.1	X	338.06866	17.06678	260.40176	14.07696	0.0697284	0.21624008	2.7490244	20	6 3.6	19.4
342698 2008 <i>VB</i> ₇₂	15.9	X	131.55841	352.76020	125.07035	10.77825	0.1082077	0.21257178	2.7805603	20	6 11.8	20.2
342699 2008 <i>VO</i> ₇₂	16.7	X	308.04491	249.68260	99.77593	4.06927	0.2205486	0.23114913	2.6295083	20	7 6.8	19.4
342700 2008 <i>VH</i> ₇₃	16.5	X	349.45398	174.27085	68.75620	5.71987	0.1022267	0.21134295	2.7913280	20	5 4.3	19.6
342701 2008 <i>VH</i> ₇₅	15.9	X	314.15455	257.05113	83.38355	15.69824	0.1461541	0.23368207	2.6104725	20	7 17.5	18.8
342702 2008 <i>VW</i> ₇₇	16.3	X	137.60554	254.75281	250.37873	12.21275	0.1449102	0.21736841	2.7395029	20	7 21.3	20.8
342703 2008 <i>VP</i> ₇₈	16.5	X	299.53025	258.77456	119.33718	5.94856	0.1545824	0.23376650	2.6098439	20	8 14.8	19.3
342704 2008 <i>VJ</i> ₇₉	16.5	X	281.59941	269.71491	120.58742	4.47820	0.1756923	0.22651393	2.6652591	20	7 28.4	19.9
342705 2008 <i>VS</i> ₇₉	16.5	X	179.94026	73.77624	23.88830	9.41050	0.1183980	0.21982473	2.7190573	20	7 6.9	20.9
342706 2008 <i>VD</i> ₈₀	15.5	X	98.52608	120.82001	298.54899	13.16065	0.0480702	0.18142745	3.0903005	20	2 10.4	20.0
342707 2008 <i>VJ</i> ₈₀	16.8	X	231.09849	104.14707	314.44745	5.64803	0.2000411	0.22055305	2.7130680	20	7 1.8	21.0
342708 2008 <i>WG</i> ₁	16.5	X	202.06023	72.27260	345.21095	7.95418	0.1863930	0.21983979	2.7189330	20	6 2.7	21.1
342709 2008 <i>WW</i> ₁	17.0	X	222.44946	276.42972	204.97016	5.70204	0.2495727	0.23335859	2.6128843	20	9 5.2	21.3
342710 2008 <i>WR</i> ₂	16.5	X	240.96093	350.67894	74.70947	3.54281	0.1119394	0.22914256	2.6448368	20	8 1.6	20.1
342711 2008 <i>WH</i> ₃	16.7	X	173.74072	281.12019	251.19482	4.28671	0.					

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342721 2008 WC ₂₃	16.2	X	221.44140	295.90887	232.98211	10.92713	0.2940545	0.24309285	2.5426579	20	10 30.5	20.1
342722 2008 WJ ₂₃	16.7	X	270.40361	265.75871	87.14723	2.67507	0.0977230	0.22275212	2.6951823	20	6 3.4	20.2
342723 2008 WL ₂₃	17.2	X	311.46037	292.59946	78.57860	4.31582	0.1310983	0.23674137	2.5879345	20	8 31.6	19.9
342724 2008 WA ₂₄	17.3	X	343.06265	146.79035	269.07944	0.81046	0.2093234	0.25234079	2.4801488	20	—	—
342725 2008 WL ₂₅	16.4	X	206.72217	202.36551	223.90152	6.61800	0.0547350	0.22016987	2.7162149	20	6 26.7	20.4
342726 2008 WQ ₂₅	16.7	X	11.29898	69.01489	227.34784	10.88764	0.1188743	0.23516779	2.5994661	20	8 25.5	19.9
342727 2008 WP ₃₂	16.7	X	309.69647	156.37192	203.57461	13.81973	0.2660821	0.23712803	2.5851205	20	7 15.2	19.5
342728 2008 WD ₃₄	17.2	X	142.68790	257.12562	216.40743	2.66920	0.1513811	0.21708630	2.7418758	20	6 19.8	21.6
342729 2008 WG ₃₄	17.2	X	268.38841	205.62468	181.43262	1.70969	0.1052139	0.23083732	2.6318757	20	7 16.1	20.6
342730 2008 WB ₃₉	17.2	X	296.05321	82.86292	231.21003	3.68051	0.1100561	0.21912389	2.7248519	20	5 15.2	20.6
342731 2008 WD ₄₀	16.8	X	223.18141	144.42617	221.99439	4.08530	0.0884269	0.21305242	2.7763768	20	4 26.8	20.9
342732 2008 WW ₄₁	16.6	X	328.52604	260.47216	39.62791	4.77279	0.0686633	0.22105081	2.7089936	20	6 20.3	19.8
342733 2008 WO ₄₂	16.7	X	335.29439	51.84067	299.41928	1.71766	0.1671825	0.23733614	2.5836091	20	9 13.9	19.0
342734 2008 WF ₄₃	17.5	X	240.92851	357.07782	44.41502	3.07185	0.1453083	0.22366212	2.6878669	20	6 25.4	21.5
342735 2008 WZ ₄₄	16.7	X	250.56591	136.35336	247.57201	4.37628	0.1007728	0.22222362	2.6994539	20	6 19.1	20.6
342736 2008 WK ₄₆	16.6	X	307.12064	282.17375	55.44174	4.93105	0.1196091	0.22535816	2.6743640	20	7 3.4	19.7
342737 2008 WW ₄₈	16.7	X	245.88884	271.15047	190.69000	2.18566	0.1712257	0.23766550	2.5812216	20	9 16.6	20.3
342738 2008 WB ₄₉	17.1	X	283.68951	47.35788	8.07785	3.91227	0.2188192	0.23789420	2.5795670	20	8 31.8	19.8
342739 2008 WS ₄₉	16.4	X	271.12868	190.99553	201.64526	8.50453	0.0197106	0.22935040	2.6432387	20	8 7.5	20.1
342740 2008 WW ₅₁	17.4	X	210.95649	6.68585	84.33550	2.48697	0.0513766	0.22891358	2.6466002	20	8 6.1	21.1
342741 2008 WK ₅₄	17.3	X	237.02634	52.97591	347.06014	3.71671	0.1359234	0.22348716	2.6892695	20	6 20.1	21.2
342742 2008 WU ₅₄	16.2	X	316.35514	261.49868	63.85168	8.40459	0.0468491	0.22489673	2.6780209	20	7 10.1	19.6
342743 2008 WT ₆₀	17.0	X	279.40460	296.68215	134.92419	1.64211	0.1707235	0.23929174	2.5695135	20	9 24.8	19.9
342744 2008 WD ₆₁	16.2	X	333.68693	140.66805	231.17798	6.53123	0.0442363	0.23847446	2.5753809	20	10 9.0	19.3
342745 2008 WT ₆₁	17.2	X	252.54355	248.20246	128.69916	3.44970	0.2118107	0.23743863	2.5828655	20	9 24.9	20.7
342746 2008 WV ₆₂	16.9	X	207.14874	167.47394	291.07111	4.07846	0.2331818	0.22444643	2.6816015	20	7 27.2	21.4
342747 2008 WK ₆₃	15.8	X	319.40812	95.41350	264.95415	11.57093	0.1991832	0.23453956	2.6041059	20	8 14.8	18.5
342748 2008 WW ₆₅	16.0	X	7.56663	252.88129	62.21421	6.15326	0.2137012	0.23806887	2.5783051	20	10 7.6	18.5
342749 2008 WU ₆₆	16.4	X	310.87872	254.60037	79.82480	5.82557	0.0847810	0.22500404	2.6771693	20	7 9.7	19.7
342750 2008 WN ₆₇	16.7	X	270.58772	315.10161	99.87779	3.13578	0.1176365	0.23306228	2.6150985	20	8 26.9	20.0
342751 2008 WV ₆₇	17.2	X	280.50097	243.78312	201.67955	1.70050	0.0484481	0.24163610	2.5528669	20	11 1.9	20.3
342752 2008 WY ₆₈	17.1	X	258.16765	251.22530	198.71522	3.03946	0.1835368	0.23610518	2.5925812	20	9 14.1	20.5
342753 2008 WU ₇₃	16.5	X	233.59087	324.73161	83.72131	13.16643	0.1222674	0.21872051	2.7282011	20	6 28.4	20.6
342754 2008 WJ ₇₅	15.9	X	324.82334	247.94478	46.04799	14.26707	0.1620453	0.22522819	2.6753928	20	5 23.6	18.8
342755 2008 WG ₇₈	17.3	X	238.36950	175.67631	209.80250	4.55391	0.1788106	0.22079124	2.7111164	20	5 29.8	21.6
342756 2008 WK ₇₉	16.4	X	303.58721	210.02531	126.08120	4.94970	0.1956113	0.22742881	2.6581066	20	6 13.3	19.4
342757 2008 WX ₈₁	16.6	X	77.31565	152.32812	102.18660	7.35806	0.0539781	0.23412622	2.6071700	20	10 3.1	20.2
342758 2008 WF ₈₃	17.3	X	214.87764	309.54661	176.69876	4.54411	0.0884562	0.23354997	2.6111568	20	9 22.3	20.9
342759 2008 WD ₈₅	16.3	X	227.24166	353.03492	88.92258	15.28795	0.1586507	0.22471145	2.6794927	20	8 3.1	20.5
342760 2008 WV ₈₈	16.7	X	272.56185	284.09597	22.47487	6.91510	0.0871762	0.21172847	2.7879386	20	4 8.2	20.6
342761 2008 WL ₉₂	17.0	X	265.07341	358.09443	1.79260	1.62587	0.1078635	0.22196248	2.7015707	20	6 3.9	20.7
342762 2008 WV ₉₄	16.6	X	239.38189	300.19078	73.36369	3.50819	0.0250817	0.21651141	2.7467272	20	6 1.1	20.2
342763 2008 WD ₉₅	16.5	X	208.70166	299.60918	160.47746	15.34850	0.0549825	0.22578737	2.6709737	20	8 12.7	20.3
342764 2008 WU ₉₅	16.9	X	272.68962	290.59777	93.87840	7.13309	0.1615596	0.22885756	2.6470321	20	7 9.9	20.5
342765 2008 WB ₉₇	17.3	X	40.26758	236.68861	106.38273	5.81486	0.1569028	0.25353399	2.4723612	20	12 25.3	20.7
342766 2008 WC ₉₇	15.4	X	240.29660	135.27390	273.06761	13.85325	0.1201238	0.22677054	2.6632481	20	7 6.0	19.2
342767 2008 WU ₉₇	16.9	X	346.02588	245.75484	108.91038	9.86511	0.2784021	0.24502227	2.5292922	20	11 3.3	18.9
342768 2008 WL ₉₈	16.0	X	203.18821	157.07376	338.43140	7.47325	0.1500237	0.23459598	2.6036884	20	9 14.0	20.0
342769 2008 WS ₉₈	16.3	X	283.38605	67.79189	301.99612	3.20698	0.1115589	0.22827756	2.6515139	20	7 12.9	19.5
342770 2008 WV ₉₈	16.1	X	328.07750	225.31743	80.83571	5.19010	0.0828814	0.22314525	2.6920159	20	6 27.2	19.3
342771 2008 WH ₁₀₁	16.7	X	252.88642	19.37865	75.03759	13.25344	0.1558005	0.23564226	2.5959756	20	9 26.2	20.4
342772 2008 WK ₁₀₁	16.6	X	225.90051	295.78624	76.85724	10.77682	0.1852221	0.21440197	2.7647139	20	5 3.9	21.1
342773 2008 WM ₁₀₁	15.8	X	330.37369	34.08556	324.25266	8.74337	0.0806579	0.23786750	2.5797601	20	9 13.6	18.8
342774 2008 WP ₁₀₁	16.9	X	297.53273	295.64699	98.55827	5.85648	0.308253	0.23845422	2.5755266	20	8 4.6	19.4
342775 2008 WO ₁₀₂	16.8	X	287.27268	240.38102	121.42958	13.87486	0.3082923	0.23212709	2.6221176	20	6 7.6	20.5
342776 2008 WN ₁₀₃	17.2	X	14.76690	252.29331	47.21927	3.38977	0.0735545	0.23181036	2.6245055	20	9 6.4	20.4
342777 2008 WH ₁₀₆	16.9	X	210.00643	47.61745	13.14654	4.74824	0.0937131	0.22033732	2.7148386	20	6 20.9	20.9
342778 2008 WN ₁₀₇	16.5	X	9.18657	316.59390	300.59525	4.17039	0.0558903	0.21976880	2.7195185	20	6 25.1	19.8
342779 2008 WG ₁₀₈	16.4	X	236.36244	99.10863	30.93008	7.67989	0.1543272	0.24081459	2.5586694	20	10 15.9	19.9
342780 2008 WN ₁₀₉	17.2	X	203.53182	127.30390	278.91819	3.29538	0.0643006	0.21503678	2.7592701	20	5 27.1	21.2
342781 2008 WO ₁₀₉	16.9	X	150.36864	175.49922	31.02354	2.59024	0.0510227	0.23905194	2.5712316	20	10 24.7	20.5
342782 2008 WT ₁₁₀	16.7	X	319.98936	262.48811	59.33297	3.15579	0.0568149	0.22342198	2.6897925	20	7 9.3	20.1
342783 2008 WE ₁₁₃	17.5	X	301.40186	85.69983	260.41866	0.88549	0.0548069	0.22399115	2.6852341	20	7 14.9	20.8
342784 2008 WV ₁₁₃	16.2	X	158.38607	151.91477	253.57190	9.63053	0.0634098	0.20343390	2.8632142	20	4 2.1	20.5
342785 2008 WW ₁₁₄	17.2	X	193.20445	281.10517	221.75502	0.42199	0.0934681	0.23169242	2.6253961	20	9 18.0	20.8
342786 2008 WR ₁₁₇	16.7	X	321.24473	254.94712	73.36433	3.93740	0.1464437	0.22780683	2.6551653	20	7 11.8	19.4
342787 2008 WA ₁₂₀	16.2	X	255.15063	85.37764	255.51625	10.88685	0.1577260	0.21486027	2.7607811	20	4 19.6	20.6
342788 2008 WL ₁₂₀	16.0	X	221.25644	196.23696	271.36441	12.83118	0.1970897	0.22731017	2.6590314	20	8 18.0	20.5
342789 2008 WH ₁₂₂	16.3	X	334.25505	7.68224	321.90484	9.29051	0.2104840	0.23668726	2.5883289	20	8 7.5	18.4
342790 2008 WW ₁₂₂	16.1	X	348.89586	235.81652	62.38022	13.68329	0.2615442	0.22928633	2.6437310	20	7 26.3	18.2
342791 2008 WJ ₁₂₅	16.1	X	145.90106	195.21542	269.29939	10.11657	0.2216788	0.21018668	2.8015557	20	6 15.0	20.8
342792 2008 WT ₁₂₆	16.3	X	62.82058	319.61002	153.96511	3.15180	0.1155123	0.18283314	3.0744405	20	3 13.8	20.1
342793 2008 WR ₁₂₉	16.7	X	285.27300	301.97681	70.00729	7.07184						

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
342801	2008	WH ₁₃₉	16.8	X	191.20364	20.36269	97.43006	12.31436	0.1587970	0.22363412	2.6880912	20	8 12.9	21.2
342802	2008	WQ ₁₃₉	15.4	X	93.02172	282.46137	134.37650	27.23103	0.1106507	0.17766355	3.1337944	20	2 13.3	19.7
342803	2008	WH ₁₄₀	15.7	X	296.82495	22.66818	16.78252	15.04820	0.1087916	0.23779762	2.5802654	20	9 20.7	18.6
342804	2008	WX ₁₄₀	16.5	X	336.74240	191.46515	151.74556	10.03821	0.2609722	0.23834625	2.5763044	20	9 6.9	18.1
342805	2008	WO ₁₄₁	15.9	X	159.59982	262.63910	220.71640	12.51278	0.1542869	0.21943458	2.7222792	20	7 15.5	20.5
342806	2008	WU ₁₄₁	16.9	X	122.59191	215.78926	269.96926	0.75408	0.1791103	0.21022048	2.8012554	20	6 17.5	21.3
342807	2008	XO ₁	15.8	X	218.10548	351.09400	73.04263	16.63279	0.0907117	0.22040546	2.7142790	20	7 4.5	19.9
342808	2008	XV ₁	15.6	X	230.14854	305.84718	98.69104	16.19322	0.0586855	0.21960544	2.7208671	20	6 26.8	19.4
342809	2008	XK ₃	16.3	X	181.79432	129.72064	321.29673	12.13403	0.2269352	0.21596913	2.7513231	20	6 28.9	21.2
342810	2008	XQ ₃	16.9	X	267.57882	31.61781	22.28145	2.87352	0.1612861	0.23166516	2.6256021	20	8 13.8	20.2
342811	2008	XW ₃	16.2	X	169.92459	179.35960	287.46498	4.80075	0.0086933	0.21993993	2.7181077	20	7 6.8	19.9
342812	2008	XR ₄	16.5	X	251.19642	86.91507	49.45645	6.95867	0.1790045	0.24254820	2.5464629	20	11 8.8	19.5
342813	2008	XE ₆	16.5	X	323.02780	349.39188	18.39305	7.24715	0.1766364	0.23701331	2.5859546	20	9 15.4	18.8
342814	2008	XR ₆	16.2	X	236.93467	348.56811	55.31174	10.07336	0.3141365	0.22131171	2.7068641	20	6 7.7	20.9
342815	2008	XU ₆	16.5	X	322.95552	275.63986	96.68620	5.63808	0.1123440	0.23587265	2.5942848	20	9 26.1	19.3
342816	2008	XV ₆	16.4	X	287.03679	286.74226	155.84439	5.68090	0.0438734	0.24141575	2.5544201	20	11 9.7	19.5
342817	2008	XQ ₈	17.0	X	218.27268	234.32363	190.07016	6.10463	0.0511949	0.22205192	2.7008452	20	7 8.4	21.0
342818	2008	XD ₁₄	16.9	X	185.64165	202.60312	264.97133	6.07307	0.1911163	0.22252244	2.6970366	20	7 21.1	21.3
342819	2008	XJ ₁₆	16.3	X	303.65316	299.67994	89.62619	6.68904	0.1363330	0.23529143	2.5985554	20	9 13.7	19.2
342820	2008	XP ₁₆	16.3	X	320.84441	66.42664	248.39035	13.19872	0.1754124	0.22305637	2.6927310	20	6 15.8	19.2
342821	2008	XQ ₂₀	16.2	X	119.82619	48.28156	85.58037	16.12450	0.0949904	0.20610497	2.8384227	20	6 16.6	20.4
342822	2008	XO ₂₁	15.6	X	149.97043	201.62570	273.50053	11.37934	0.0902881	0.21088226	2.7953918	20	6 25.8	19.8
342823	2008	XQ ₂₉	17.5	X	230.73207	133.07787	330.47330	2.62553	0.1234914	0.23418857	2.6067072	20	9 6.6	21.3
342824	2008	XB ₃₀	16.1	X	101.18957	313.37134	213.69945	11.76472	0.0820676	0.21590168	2.7518961	20	7 4.7	20.2
342825	2008	XS ₃₀	17.4	X	249.11513	234.93243	131.31417	1.70775	0.1252551	0.21966524	2.7203732	20	5 22.3	21.2
342826	2008	XE ₃₁	16.6	X	252.83978	271.34053	46.44010	8.19721	0.2235036	0.21107579	2.7936828	20	3 20.4	21.2
342827	2008	XL ₃₅	16.8	X	323.92528	239.16082	40.19967	5.19050	0.0918949	0.21393549	2.7687314	20	5 12.1	20.0
342828	2008	XP ₃₅	17.1	X	290.21871	85.10150	277.46730	4.80685	0.1844107	0.22864771	2.6486514	20	6 30.9	20.1
342829	2008	XG ₃₆	16.7	X	302.61138	250.20379	49.35261	6.17120	0.0450041	0.21297669	2.7770348	20	5 14.5	20.3
342830	2008	XQ ₃₆	17.1	X	188.00263	48.08570	3.43410	1.92174	0.0734501	0.21205331	2.7850907	20	5 15.9	21.2
342831	2008	XG ₃₇	16.7	X	269.20449	134.68557	285.44674	2.92542	0.0855802	0.23315286	2.6144212	20	9 3.4	20.0
342832	2008	XR ₃₈	17.1	X	199.83175	336.64424	57.86850	5.66858	0.0450693	0.21041373	2.7995400	20	5 9.2	21.2
342833	2008	XJ ₄₀	15.8	X	225.57806	331.85603	73.66314	12.30734	0.0490248	0.21693933	2.7431140	20	6 22.8	19.6
342834	2008	XQ ₄₂	15.4	X	49.91378	200.90120	293.28254	8.29969	0.0169503	0.19298460	2.9656572	20	3 5.8	19.6
342835	2008	XX ₄₆	15.5	X	13.28885	290.56186	198.04364	13.22500	0.2185193	0.17369058	3.1814019	20	1 9.8	19.1
342836	2008	XN ₄₇	17.2	X	229.06854	138.58664	318.66988	3.28906	0.1607018	0.22712198	2.6605001	20	8 22.2	21.1
342837	2008	XA ₄₉	16.8	X	225.30983	130.76961	297.09360	1.45067	0.0465767	0.21951407	2.7216220	20	7 23.2	20.5
342838	2008	XM ₄₉	16.6	X	270.41889	58.89487	278.67021	5.47291	0.1564095	0.20906413	2.8115752	20	5 4.1	20.7
342839	2008	XD ₅₅	16.2	X	232.78865	128.61700	283.16602	11.95553	0.1773375	0.22199039	2.7013442	20	6 26.8	20.4
342840	2008	XU ₅₅	16.4	X	346.92654	11.83914	27.32204	5.27023	0.3004915	0.24338632	2.5406135	20	—	—
342841	2008	YG	16.9	X	269.83760	251.93861	158.79713	5.76936	0.3087880	0.23129297	2.6284179	20	7 18.5	20.7
342842	2008	YB ₃	9.3	X	84.25055	330.63624	112.65383	105.05571	0.4411712	0.02494650	11.6001336	20	7 24.4	20.9
342843	2008	Davidbowie	17.0	X	250.39306	299.87488	62.35632	2.76755	0.0891456	0.21633955	2.7481816	20	5 22.7	20.7
342844	2008	YA ₄	16.8	X	222.06328	36.89470	6.01902	6.07486	0.0793542	0.20980058	2.8049918	20	6 4.4	21.0
342845	2008	YF ₄	15.6	X	186.47699	284.08147	119.41805	15.74711	0.1545791	0.20516414	2.8470936	20	5 10.6	20.5
342846	2008	YV ₄	16.3	X	190.54157	313.90872	91.32881	9.26664	0.2287248	0.21399619	2.7682078	20	5 12.0	21.1
342847	2008	YL ₅	15.5	X	214.48304	258.24319	89.04926	12.23998	0.1019639	0.19972287	2.8985727	20	3 31.7	20.2
342848	2008	YQ ₅	15.9	X	126.86072	204.44993	270.47116	9.85547	0.0934476	0.20377330	2.8600340	20	5 30.7	20.2
342849	2008	YF ₁₀	16.2	X	285.87641	263.49644	78.30371	3.93242	0.0929602	0.22230568	2.6987895	20	6 10.2	19.4
342850	2008	YB ₁₁	16.9	X	196.34540	327.49034	97.77549	3.13136	0.2128859	0.21676903	2.7445505	20	6 8.1	21.6
342851	2008	YV ₁₂	17.1	X	283.44404	49.12913	325.19523	1.04724	0.2377816	0.22970370	2.6405277	20	6 28.5	20.5
342852	2008	YX ₁₂	16.7	X	189.71063	84.86823	72.63517	3.21112	0.1387743	0.23312551	2.6146257	20	10 1.7	20.7
342853	2008	YA ₁₄	16.3	X	343.92204	218.52134	78.89896	9.44480	0.1429769	0.22433669	2.6824760	20	7 10.3	19.0
342854	2008	YF ₁₄	16.4	X	247.67301	319.27437	119.03751	7.30926	0.1297586	0.22668484	2.6639193	20	8 25.3	20.1
342855	2008	YL ₁₅	16.8	X	254.22635	241.44420	133.90826	4.61401	0.1634034	0.21514432	2.7583505	20	6 4.6	20.9
342856	2008	YM ₁₅	16.7	X	44.18616	358.49692	166.42646	1.97924	0.0499056	0.19499522	2.9452359	20	4 13.5	20.4
342857	2008	YN ₁₇	16.6	X	169.44818	357.35088	111.69472	18.46688	0.0902568	0.21143562	2.7905123	20	7 9.2	20.9
342858	2008	YF ₁₈	17.0	X	78.59861	69.68825	76.84969	1.01023	0.0911921	0.19763467	2.9189542	20	5 12.5	20.8
342859	2008	YF ₂₃	16.9	X	172.43268	250.81792	213.45096	3.35804	0.2833261	0.21455353	2.7634118	20	7 5.9	21.9
342860	2008	YL ₂₃	16.3	X	302.47719	110.08846	286.33100	16.18962	0.2008739	0.23418407	2.6067406	20	8 30.1	19.3
342861	2008	YF ₂₄	16.1	X	215.57953	110.95827	25.39585	12.74817	0.1530937	0.23669931	2.5882410	20	10 1.9	19.9
342862	2008	YL ₂₇	17.1	X	244.16173	324.99803	108.15952	7.52614	0.2391689	0.22870029	2.6482454	20	7 30.0	21.0
342863	2008	YO ₃₀	15.9	X	321.93993	224.28771	359.45515	10.01674	0.0425374	0.18990051	2.9976801	20	3 7.1	19.9
342864	2008	YF ₃₂	15.5	X	95.99546	325.44234	62.98823	7.02415	0.1039778	0.18343130	3.0677532	20	1 12.0	19.7
342865	2008	YN ₃₂	16.6	X	252.17176	10.33464	71.34619	3.31911	0.1895762	0.22944250	2.6425313	20	8 26.9	20.3
342866	2008	YU ₃₂	20.1	X	35.29929	83.91100	232.62164	3.41042	0.5956073	0.51718085	1.5371199	20	—	—
342867	2008	YP ₃₄	15.3	X	68.18328	169.99724	282.00576	8.81860	0.0539620	0.18433294	3.0577414	20	2 12.1	19.5
342868	2008	YJ ₃₅	16.2	X	1.34847	68.03648	112.61775	13.08787	0.0670837	0.18619141	3.0373601	20	3 8.5	20.3
342869	2008	YJ ₃₈	16.5	X	200.16885	321.82634	111.87693	6.42089	0.0689904	0.21411202	2.7672094	20	6 28.2	20.6
342870	2008</													

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342881 2008 YC ₅₈	17.3	X	225.27651	27.36660	48.83027	2.76856	0.0540590	0.21974270	2.7197339	20	8 3.4	21.0
342882 2008 YO ₅₈	15.9	X	179.01376	27.47629	297.90735	9.46704	0.2524188	0.18711599	3.0273464	20	1 30.6	21.3
342883 2008 YG ₆₄	16.7	X	198.40978	242.58163	191.51545	3.58804	0.0716987	0.21114735	2.7930516	20	6 26.3	20.9
342884 2008 YE ₇₁	15.9	X	76.17010	358.12888	83.07902	6.93859	0.1322172	0.18448482	3.0560629	20	2 25.7	19.9
342885 2008 YK ₇₄	16.3	X	178.18937	357.13338	58.69606	2.04053	0.0569511	0.20473494	2.8510713	20	5 11.2	20.2
342886 2008 YM ₈₃	16.9	X	204.29732	341.99864	23.31701	2.08994	0.0825390	0.19966785	2.8991051	20	4 6.5	21.3
342887 2008 YT ₈₄	15.4	X	85.35611	157.09857	274.02781	10.58819	0.1024286	0.18453075	3.0555558	20	2 13.9	19.7
342888 2008 YK ₈₅	16.9	X	175.72016	183.33793	251.47204	2.39300	0.0695381	0.21348123	2.7726577	20	6 1.7	20.8
342889 2008 YM ₈₅	16.8	X	270.60249	90.82173	265.01117	2.37472	0.1116583	0.22016914	2.7162209	20	6 5.3	20.5
342890 2008 YJ ₉₄	16.1	X	268.92061	20.31082	278.89814	2.29507	0.1337491	0.19715818	2.9236554	20	3 19.2	20.5
342891 2008 YF ₉₅	15.9	X	128.35170	254.36392	109.49698	12.06669	0.1583604	0.18219016	3.0816698	20	1 27.1	20.5
342892 2008 YG ₉₉	16.7	X	205.58244	81.74745	287.48850	5.36750	0.0896700	0.19945427	2.9011743	20	4 9.6	21.3
342893 2008 YG ₁₀₀	16.2	X	193.15701	55.62527	297.67472	10.98466	0.1957423	0.19484449	2.9467546	20	3 7.1	21.4
342894 2008 YP ₁₀₀	16.0	X	174.00038	261.49503	120.10856	3.00984	0.1200191	0.19530789	2.9420916	20	3 28.7	20.6
342895 2008 YT ₁₀₀	15.6	X	75.55060	139.61703	298.82942	8.26391	0.0478642	0.18256644	3.0774340	20	2 6.3	19.8
342896 2008 YW ₁₀₁	17.0	X	180.46246	312.20874	140.60742	2.94054	0.0441752	0.21127999	2.7918825	20	6 30.7	20.9
342897 2008 YM ₁₀₇	16.0	X	94.68478	304.87452	117.81884	5.63365	0.0673723	0.18292906	3.0733658	20	2 16.2	20.2
342898 2008 YZ ₁₁₀	16.4	X	291.67360	245.11770	64.04667	4.76572	0.0911288	0.21344344	2.7729849	20	5 6.1	20.0
342899 2008 YW ₁₁₃	16.0	X	186.90740	289.74155	92.72341	3.19663	0.0752088	0.19948255	2.9009001	20	4 10.7	20.4
342900 2008 YZ ₁₁₇	15.8	X	180.65741	49.58843	310.83624	8.92468	0.1247863	0.19117752	2.9843183	20	3 5.8	20.6
342901 2008 YO ₁₂₀	16.2	X	169.14119	56.21064	319.68698	5.42227	0.0204322	0.19185618	2.9772743	20	3 9.3	20.5
342902 2008 YM ₁₂₁	16.1	X	69.52769	262.28045	88.39860	6.87775	0.2107963	0.25337492	2.4733959	20	—	—
342903 2008 YP ₁₂₃	15.5	X	188.72609	291.41653	117.29699	15.98783	0.1398101	0.20663662	2.8335520	20	5 18.5	20.3
342904 2008 YL ₁₂₅	16.2	X	139.49297	131.72908	299.41307	7.10490	0.0124889	0.196273884	2.9324308	20	4 8.0	20.5
342905 2008 YP ₁₂₆	16.0	X	293.82394	106.27217	101.61059	6.16960	0.0527081	0.17733849	3.1373844	20	1 12.0	20.3
342906 2008 YE ₁₂₇	16.5	X	248.18676	279.25699	82.11954	3.20596	0.0924954	0.20731259	2.8273892	20	5 19.0	20.6
342907 2008 YN ₁₂₇	16.3	X	312.58313	252.62236	303.07810	2.62373	0.1349519	0.17506829	3.1646892	20	1 9.1	20.7
342908 2008 YP ₁₃₃	16.3	X	252.90443	325.06007	129.33172	16.76733	0.1331044	0.23039886	2.6352136	20	9 26.7	20.0
342909 2008 YK ₁₃₄	17.1	X	211.84670	295.16181	99.27065	1.87289	0.0779827	0.21428651	2.7657069	20	5 21.2	21.0
342910 2008 YM ₁₄₆	16.3	X	199.65555	320.17186	128.01148	5.26393	0.1088683	0.21339639	2.7733925	20	7 13.9	20.5
342911 2008 YG ₁₄₉	16.3	X	149.54298	348.34551	98.29317	3.32905	0.0321694	0.20485750	2.8499340	20	5 16.5	20.3
342912 2008 YZ ₁₅₁	15.5	X	156.95617	228.32191	134.81298	10.30906	0.0881604	0.18364240	3.0654018	20	2 17.4	20.1
342913 2008 YM ₁₅₃	16.4	X	240.13331	45.28791	293.24546	1.06114	0.1534551	0.20083274	2.8878838	20	4 4.9	20.9
342914 2008 YT ₁₅₃	16.2	X	287.11656	343.60745	69.41846	16.32425	0.2265354	0.23308601	2.6149210	20	9 10.4	19.5
342915 2008 YA ₁₅₄	16.1	X	135.93165	264.17806	96.49388	5.27974	0.1317205	0.17864853	3.1222649	20	1 28.8	20.8
342916 2008 YN ₁₅₅	16.6	X	326.72311	112.11088	114.02129	3.87720	0.0902720	0.18613267	3.0379991	20	3 11.2	20.6
342917 2008 YA ₁₅₆	15.8	X	86.90487	188.61289	250.41794	8.52211	0.1221748	0.18639680	3.0351285	20	2 28.4	20.1
342918 2008 YP ₁₅₆	16.8	X	187.88187	135.51059	260.17513	5.08914	0.0728372	0.19986603	2.8971883	20	4 25.2	21.2
342919 2008 YY ₁₅₆	16.0	X	228.26743	294.46752	100.30342	9.09295	0.1241090	0.21784255	2.7355264	20	6 5.7	20.2
342920 2008 YW ₁₅₆	15.4	X	148.12049	214.47924	136.63298	9.95601	0.0763763	0.17847951	3.1242358	20	1 23.6	20.0
342921 2008 YM ₁₅₈	15.9	X	143.61887	54.22912	318.93014	15.06107	0.1182163	0.18089243	3.0963910	20	2 16.4	20.6
342922 2008 YE ₁₆₇	15.8	X	188.81340	244.76832	264.42423	12.08670	0.1217054	0.22839188	2.6506290	20	9 12.6	20.2
342923 2008 YN ₁₆₈	15.6	X	147.22285	330.93623	80.67875	11.46195	0.0793576	0.19453883	2.9498404	20	4 8.9	20.2
342924 2008 YT ₁₆₈	15.6	X	94.62260	118.47910	296.46296	7.17958	0.0994993	0.18432410	3.0578391	20	2 8.6	19.9
342925 2008 YO ₁₆₉	16.2	X	187.03386	222.06395	153.39455	4.40711	0.0264402	0.19353249	2.9600573	20	4 2.1	20.4
342926 2008 YX ₁₆₉	16.2	X	183.66944	79.97470	21.33905	9.33683	0.1643811	0.21528395	2.7515777	20	7 15.9	20.7
342927 2008 YA ₁₇₁	15.9	X	19.54293	78.08483	101.43122	12.41564	0.0747143	0.18934014	3.0035919	20	4 4.7	19.9
342928 2008 YJ ₁₇₁	16.2	X	181.17970	275.75406	165.51604	9.41547	0.2113883	0.21010572	2.8022753	20	6 15.7	21.1
342929 2008 YW ₁₇₁	16.9	X	200.98738	135.88992	245.86723	1.06240	0.0723227	0.19878290	2.9077030	20	4 23.2	21.1
342930 2009 AV ₁	16.8	X	249.37043	213.01710	218.36178	6.97226	0.2790750	0.22974139	2.6402389	20	7 25.7	21.0
342931 2009 AF ₁₂	15.9	X	28.09348	158.33813	104.08894	6.81796	0.0257975	0.17642863	3.1484008	20	1 6.5	20.2
342932 2009 AY ₁₈	16.1	X	194.18352	298.35882	112.34192	8.21906	0.0690860	0.20579343	2.8412866	20	5 24.4	20.4
342933 2009 AH ₂₁	16.5	X	303.55968	272.48054	85.90307	7.24735	0.0739239	0.22250004	2.6972176	20	8 3.7	19.8
342934 2009 AR ₂₁	16.9	X	219.99763	118.42475	293.75640	3.77838	0.1608502	0.21639909	2.7476776	20	6 15.5	21.2
342935 2009 AV ₂₁	16.7	X	294.97972	47.68025	224.76488	2.18552	0.0051574	0.19636388	2.9315343	20	4 5.0	20.7
342936 2009 AS ₂₂	17.3	X	187.27206	243.31163	192.83649	1.97087	0.0659956	0.21038504	2.7997944	20	6 16.7	21.4
342937 2009 AJ ₂₃	16.2	X	254.85157	237.88118	112.38186	13.18440	0.0720778	0.20627660	2.8368480	20	5 19.1	20.4
342938 2009 AX ₂₃	16.0	X	236.20038	27.28351	282.26717	7.63197	0.0758708	0.18900184	3.0071750	20	2 29.9	20.7
342939 2009 AA ₂₄	16.6	X	250.93339	269.63115	131.36946	5.67798	0.0913066	0.21632385	2.7483146	20	7 13.2	20.4
342940 2009 AH ₂₄	16.3	X	234.26585	241.38672	135.60086	8.84116	0.3041423	0.21310504	2.7759197	20	5 8.7	21.3
342941 2009 AU ₃₀	16.7	X	233.08603	234.39602	106.09981	3.13878	0.0829897	0.20096938	2.8865746	20	4 7.9	21.0
342942 2009 AY ₃₁	16.1	X	302.24296	139.15626	304.56728	14.03624	0.1245570	0.23910327	2.5708636	20	11 24.3	19.2
342943 2009 AO ₃₂	16.0	X	97.37230	147.92672	310.83160	8.90209	0.0644642	0.19037183	2.9927303	20	3 28.2	20.3
342944 2009 AX ₃₂	16.6	X	69.18810	199.25831	315.02727	3.46147	0.1478943	0.19426255	2.9526365	20	5 17.3	20.5
342945 2009 AK ₃₅	16.8	X	71.24190	125.44248	307.94107	1.32021	0.0521641	0.18020967	3.1042069	20	1 27.7	21.0
342946 2009 AY ₃₆	16.1	X	299.64346	273.09446	88.45864	7.36710	0.0498964	0.22124804	2.7073834	20	8 5.0	19.6
342947 2009 AS ₃₇	16.5	X	144.59158	169.45943	222.62135	0.64357	0.0662569	0.18904163	3.0067530	20	3 6.3	20.9
342948 2009 AZ ₃₇	17.1	X	109.91376	299.11626	147.72978	0.92362	0.0448410	0.19252378	2.9703876	20	3 30.8	21.3
342949 2009 AQ ₃₈	16.1	X	12.38619	7.95642	134.70028	6.75059	0.0835811	0.18114316	3.0935331	20	2 1.2	19.8
342950 2009 AD ₃₉	16.7	X	223.79805	122.64607	269.11640	3.12400	0.1126014	0.20915235	2.8107845	20	5 27.9	21.0
342951 2009 AE ₄₄	16.4	X	82.79343	305.10898	147.57694	7.59827	0.0562059	0.18412232	3.0600728	20	3 7.2	20.5
342952 2009 AD ₄₅	16.2	X	120.48209	223.23178	129.40496	2.45042	0.0692242	0.17010835	3.2259104	20	—	—
342953 2009 AE ₄₇	15.8	X	20.86026	26.73112	145.594							

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
342961 2009 BB ₁	16.7	X	190.47572	310.99712	109.20283	5.38641	0.0968047	0.20892426	2.8128299	20	5 30.7	21.1
342962 2009 BU ₆	16.0	X	16.26113	259.08131	262.73901	6.90869	0.1910593	0.18318995	3.0704471	20	2 26.9	19.4
342963 2009 BY ₆	15.7	X	43.13008	293.29512	147.19146	14.72072	0.2246188	0.17661794	3.1461506	20	1 10.0	19.2
342964 2009 BF ₇	15.9	X	22.88957	244.80945	258.23618	7.07737	0.1721080	0.18341989	3.0678804	20	2 14.9	19.3
342965 2009 BG ₈	15.8	X	53.90663	183.45086	288.67945	16.12923	0.1548244	0.18591214	3.0404012	20	2 23.4	19.7
342966 2009 BA ₁₀	16.1	X	81.96998	160.36855	297.35644	8.99079	0.0761935	0.18887199	3.0085531	20	3 9.3	20.4
342967 2009 BT ₁₀	16.5	X	130.41512	167.70288	263.18445	5.54129	0.2236203	0.19610930	2.9340708	20	4 20.2	21.4
342968 2009 BQ ₁₃	16.7	X	137.88238	86.12181	110.05253	3.76353	0.1558609	0.19818980	2.9135011	20	5 23.6	21.3
342969 2009 BK ₁₅	16.5	X	305.77554	78.78016	270.63874	3.78338	0.1238924	0.22000233	2.7175937	20	7 16.4	19.7
342970 2009 BY ₁₆	15.9	X	81.98117	317.23086	146.81349	10.87693	0.0384494	0.18316821	3.0706901	20	3 19.2	20.2
342971 2009 BX ₂₁	16.8	X	72.91177	145.13404	2.32862	1.46730	0.0258284	0.19731166	2.9221391	20	4 25.9	20.7
342972 2009 BE ₂₄	15.7	X	358.40862	197.85004	334.24400	12.46790	0.0462320	0.18044212	3.1015403	20	2 20.3	19.9
342973 2009 BH ₂₄	16.1	X	82.59772	8.01863	82.73606	5.20802	0.1209866	0.18424627	3.0587002	20	3 15.4	20.2
342974 2009 BW ₂₅	16.3	X	336.92309	259.45068	335.81482	5.56441	0.0923593	0.19247541	2.9708853	20	4 2.3	20.0
342975 2009 BV ₂₇	17.0	X	253.42251	37.46103	6.21236	4.08154	0.1735227	0.21902610	2.7256628	20	7 9.6	21.0
342976 2009 BO ₃₆	15.4	X	147.96231	219.95538	115.42398	11.14601	0.0381234	0.17071961	3.2182055	20	1 2.7	20.0
342977 2009 BU ₃₉	15.6	X	101.62093	99.15438	130.71157	10.01812	0.0706242	0.18330355	3.0691784	20	3 1.9	20.0
342978 2009 BQ ₄₀	16.0	X	69.77786	141.84745	324.93838	14.52671	0.1957135	0.18547030	3.0452279	20	3 19.8	20.1
342979 2009 BK ₄₂	16.7	X	184.10968	77.68546	355.18394	1.65273	0.0735485	0.20431188	2.8550056	20	6 8.4	21.0
342980 2009 BN ₄₂	15.7	X	184.36388	195.36779	134.50712	10.00923	0.0167189	0.17753414	3.1353170	20	2 3.6	20.1
342981 2009 BJ ₄₃	16.7	X	76.87017	115.06088	8.57592	2.25482	0.0826369	0.18903677	3.0068045	20	4 9.3	20.8
342982 2009 BV ₄₅	15.4	X	19.42243	177.89286	307.66730	8.27267	0.0486368	0.17432559	3.1736714	20	1 23.3	19.5
342983 2009 BN ₄₆	16.2	X	138.90795	243.38748	153.54683	13.52834	0.0267456	0.18191355	3.0847929	20	3 3.2	20.5
342984 2009 BM ₄₇	16.2	X	18.87912	293.69024	174.09163	1.36127	0.0915047	0.17007559	3.2263246	20	—	—
342985 2009 BY ₄₈	16.0	X	134.38575	320.49509	127.48389	12.36085	0.0618935	0.19718755	2.9233651	20	5 7.1	20.5
342986 2009 BN ₄₉	16.7	X	183.10418	96.92954	359.51120	0.95930	0.0299222	0.20983951	2.8046449	20	7 9.3	20.7
342987 2009 BL ₅₀	16.2	X	194.79223	339.32788	120.04207	6.10633	0.1303001	0.21419552	2.7664901	20	7 22.3	20.4
342988 2009 BT ₅₁	15.8	X	189.41735	323.74422	316.89353	8.92275	0.0492563	0.16750810	3.2592087	20	—	—
342989 2009 BL ₅₂	15.6	X	44.24627	124.92261	336.10380	15.85507	0.1045143	0.17442694	3.1724419	20	2 2.6	19.6
342990 2009 BP ₅₄	16.7	X	187.31457	23.91669	25.8286	2.17308	0.0633096	0.20030572	2.8929471	20	5 13.3	20.9
342991 2009 BU ₅₄	15.8	X	28.67699	103.78176	336.82486	7.00531	0.0603107	0.16872934	3.2434632	20	—	—
342992 2009 BA ₅₈	16.6	X	73.22679	358.20572	110.63685	2.86769	0.1921720	0.18477269	3.0528879	20	4 3.7	20.5
342993 2009 BW ₆₀	16.5	X	239.96189	118.39886	304.38972	9.97509	0.1460984	0.22080515	2.7110025	20	7 22.4	20.3
342994 2009 BC ₆₂	16.1	X	223.50480	162.86213	138.87805	10.88350	0.0631635	0.17977576	3.1091998	20	2 12.8	20.6
342995 2009 BB ₆₅	15.9	X	95.45660	91.35681	323.45402	8.31420	0.0949924	0.17892837	3.1190086	20	2 11.1	20.0
342996 2009 BN ₆₈	16.8	X	195.60662	7.31009	112.01044	2.96713	0.1426506	0.22010120	2.7167798	20	8 17.9	21.1
342997 2009 BF ₆₉	16.7	X	136.13727	289.33138	143.82807	3.33057	0.1185233	0.19312932	2.9641755	20	4 22.6	21.1
342998 2009 BF ₇₁	15.8	X	82.52924	259.97402	225.14360	3.07202	0.1200146	0.19257343	2.9698770	20	4 24.0	19.7
342999 2009 BP ₇₂	16.6	X	36.28373	331.56116	163.21835	5.83950	0.0959379	0.18314889	3.0709060	20	2 27.2	20.4
343000 ljontichy	15.7	X	164.86477	89.27633	301.20239	9.08199	0.0402678	0.19271928	2.9683785	20	3 20.3	20.2
343001 2009 BH ₇₅	15.8	X	131.28832	144.25631	290.67398	10.45858	0.0611701	0.19165268	2.9793816	20	4 6.9	20.4
343002 2009 BL ₇₆	15.7	X	287.96014	304.22111	128.08967	13.79007	0.1570207	0.22958137	2.6414656	20	10 16.5	18.9
343003 2009 BB ₇₈	15.6	X	69.56061	260.49690	145.92101	11.07273	0.0227642	0.17098162	3.2149170	20	—	—
343004 2009 BD ₇₈	15.7	X	196.76962	46.76675	276.88726	15.44816	0.0790161	0.18431843	3.0579018	20	2 5.0	20.6
343005 2009 BO ₈₁	15.8	X	166.84442	32.77373	7.38592	14.36679	0.1087474	0.19193594	2.9764495	20	4 9.3	20.5
343006 2009 BO ₈₃	15.7	X	339.85255	324.05899	221.59497	4.39401	0.0152233	0.17586865	3.1550804	20	2 13.6	20.1
343007 2009 BW ₈₄	15.7	X	128.13686	245.61581	138.82318	10.60347	0.0368538	0.18045621	3.1013789	20	2 5.2	20.1
343008 2009 BV ₈₆	16.3	X	289.13970	263.38690	319.80696	10.41783	0.0309157	0.17712355	3.1401604	20	1 28.5	20.7
343009 2009 BL ₈₉	15.8	X	117.81483	90.74276	307.77614	8.09141	0.0202831	0.17973951	3.1096178	20	2 7.2	20.2
343010 2009 BO ₈₉	16.7	X	108.87053	281.72026	162.53276	1.40157	0.0794012	0.18981812	2.9985475	20	3 31.3	21.0
343011 2009 BR ₉₀	15.8	X	161.61017	232.24166	138.37424	10.17272	0.1013468	0.18512136	3.0490533	20	3 3.6	20.4
343012 2009 BU ₉₁	16.4	X	47.94849	333.69457	139.27572	1.60237	0.1743393	0.18136933	3.0909607	20	2 25.6	19.9
343013 2009 BM ₉₂	16.9	X	155.37174	126.40606	317.79401	6.73414	0.1807960	0.20203373	2.8764277	20	5 25.9	21.7
343014 2009 BV ₉₂	15.9	X	20.80599	41.97052	138.24321	9.95072	0.0556412	0.18771726	3.0208784	20	4 4.1	19.9
343015 2009 BU ₉₃	16.1	X	129.12216	233.74337	147.30605	8.76528	0.1767914	0.18091130	3.0961756	20	2 18.5	20.9
343016 2009 BZ ₉₄	15.6	X	181.13652	183.87223	141.99080	12.13190	0.0940335	0.17479730	3.1679591	20	1 29.2	20.6
343017 2009 BF ₉₅	17.0	X	299.67497	280.41680	32.66340	2.04728	0.0393079	0.20595990	2.8397554	20	5 29.4	20.8
343018 2009 BB ₉₇	15.2	X	286.77139	275.87673	318.41239	20.39771	0.0883264	0.18043488	3.1016233	20	1 31.5	19.7
343019 2009 BE ₁₀₀	16.7	X	200.31211	348.88797	46.99114	2.63589	0.0980596	0.20384140	2.8593970	20	5 9.5	21.1
343020 2009 BH ₁₀₀	16.8	X	347.19336	55.92775	158.30865	1.75696	0.1026845	0.18848505	3.0126692	20	3 23.5	20.3
343021 2009 BL ₁₀₈	16.2	X	71.05637	109.44820	352.21891	9.10085	0.0709134	0.17948106	3.1126023	20	3 5.2	20.3
343022 2009 BC ₁₁₄	17.0	X	148.71472	334.27777	90.41352	2.55883	0.1288658	0.19884451	2.9071023	20	4 25.2	21.5
343023 2009 BG ₁₁₅	15.6	X	328.94065	189.78358	355.03184	9.16071	0.0553515	0.17560392	3.1582505	20	1 30.1	20.0
343024 2009 BY ₁₁₅	15.9	X	105.01120	2.78991	344.08966	3.80593	0.1131540	0.16823828	3.2497715	20	—	—
343025 2009 BN ₁₂₀	15.6	X	222.67331	322.20110	132.58656	11.30098	0.1283234	0.17333219	3.1857858	20	1 11.2	20.8
343026 2009 BV ₁₂₂	15.9	X	122.61340	61.45046	328.77541	8.03570	0.1307985	0.17889726	3.1193703	20	2 17.7	20.5
343027 2009 BE ₁₂₆	16.0	X	2.21933	226.38549	322.19230	10.21554	0.2104753	0.18206924	3.0830341	20	3 5.8	19.2
343028 2009 BJ ₁₂₈	15.8	X	173.08816	347.51304	0.02156	10.52389	0.1209287	0.17859398	3.1229007	20	2 19.7	20.8
343029 2009 BZ ₁₂₈	15.8	X	105.63173	57.98771	359.33552	10.69767	0.0639576	0.17949685	3.1124198	20	2 24.7	20.2
343030 2009 BH ₁₃₂	15.3	X	245.87721	358.76286	272.46088	11.96983	0.1191200	0.18069213	3.0986788	20	1 24.4	20.2
343031 2009 BC ₁₃₅	16.8	X	185.63623	291.59035	131.35102	2.99852	0.0533664	0.20304410	2.8668774	20	5 29.4	21.1
343032 2009 BG ₁₃₅	17.0	X	114.76034	208.45046	233.00256	1.84213	0.0825397	0.19156289	2.9803125	20	4 3.2	21.2
343033 2009 BM ₁₃₆	16.3	X	172.26696	242.89591	172.29173	1.73224	0.1424615	0.20067682	2.8893795	20	5 6.3	20

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343041 2009 BK ₁₅₃	15.9	X	272.41743	291.62798	317.62073	8.93980	0.0103236	0.18082879	3.0971174	20	2 9.8	20.3
343042 2009 BO ₁₅₆	16.4	X	120.05891	248.45849	153.55362	1.82513	0.2026156	0.18150685	3.0893993	20	3 8.0	21.1
343043 2009 BT ₁₅₇	17.2	X	95.09197	144.57320	344.55464	3.79103	0.1522025	0.19233669	2.9723135	20	5 18.8	21.5
343044 2009 BB ₁₅₈	16.3	X	12.13807	17.48658	133.20248	2.49570	0.1507546	0.17584387	3.1553768	20	2 10.3	20.0
343045 2009 BV ₁₆₀	16.6	X	11.46724	353.91388	163.25761	7.66091	0.0302739	0.18255064	3.0776116	20	2 18.4	20.8
343046 2009 BM ₁₆₂	15.7	X	176.88093	202.30376	131.63208	10.28486	0.0696463	0.17491495	3.1665384	20	2 2.9	20.3
343047 2009 BA ₁₆₃	16.4	X	14.77618	163.62111	346.67916	8.93301	0.0315563	0.17995272	3.1071611	20	2 16.9	20.6
343048 2009 BU ₁₆₆	16.1	X	74.82876	88.47394	358.59879	9.83136	0.0832268	0.17733661	3.1376449	20	2 24.7	20.3
343049 2009 BJ ₁₇₀	15.8	X	146.91697	21.44001	343.08505	8.61441	0.0863428	0.17529444	3.1619667	20	2 10.4	20.6
343050 2009 BF ₁₇₆	16.5	X	196.66308	339.33067	52.70397	3.88173	0.0714991	0.19305480	2.9649382	20	5 2.2	20.8
343051 2009 BS ₁₇₇	15.6	X	233.86758	272.63606	339.61519	13.31586	0.0453888	0.16838668	3.2478619	20	1 1.2	20.6
343052 2009 BS ₁₈₁	15.8	X	47.67567	298.08378	184.98813	20.11898	0.1573634	0.17447366	3.1718755	20	3 6.3	19.7
343053 2009 BO ₁₈₂	15.7	X	150.70648	232.63776	144.72521	9.47730	0.1248142	0.18889263	3.0083339	20	3 1.5	20.4
343054 2009 BJ ₁₈₇	15.8	X	77.21867	105.85127	7.53153	11.13517	0.0908642	0.18538608	3.0461501	20	3 29.2	19.9
343055 2009 CD ₁₂	15.7	X	193.06287	60.24381	313.76608	11.02670	0.1506582	0.19174162	2.9784601	20	3 30.9	20.8
343056 2009 CW ₁₄	15.9	X	25.70915	152.43941	345.71347	9.14811	0.2112153	0.17747488	3.1360149	20	2 21.3	19.0
343057 2009 Lucaravenni	15.7	X	59.65167	82.30496	55.38639	9.74001	0.0841866	0.18913809	3.0057305	20	4 7.8	19.7
343058 2009 CQ ₂₁	15.7	X	239.87187	314.25351	307.78341	8.32942	0.0450242	0.17384468	3.1795216	20	1 16.9	20.3
343059 2009 CG ₂₂	17.0	X	186.84645	240.98199	173.26567	2.06541	0.0628344	0.20063982	2.8897346	20	5 19.5	21.3
343060 2009 CJ ₂₃	16.4	X	3.03348	355.74802	163.05378	6.10922	0.0743260	0.17895376	3.1187136	20	2 7.7	20.5
343061 2009 CM ₂₄	16.0	X	353.91248	31.95909	149.27884	10.21446	0.0390220	0.18054979	3.1003072	20	2 25.9	20.1
343062 2009 CB ₂₅	15.6	X	105.89133	84.84921	353.39115	10.06297	0.0651660	0.18367154	3.0650776	20	3 17.9	19.9
343063 2009 CN ₂₆	16.0	X	135.85819	87.10369	341.64474	13.99396	0.1029073	0.19063116	2.9900156	20	4 8.4	20.7
343064 2009 CP ₂₈	16.3	X	169.17686	308.10988	127.53575	5.95250	0.0906088	0.19977393	2.8980787	20	5 28.3	20.8
343065 2009 CQ ₂₈	15.8	X	61.43018	148.50171	337.71774	10.30230	0.0480222	0.18399313	3.0615050	20	3 16.6	20.0
343066 2009 CY ₃₀	15.6	X	170.19400	214.00523	142.74635	11.62520	0.1376462	0.17815268	3.1280557	20	2 26.5	20.6
343067 2009 CT ₃₁	16.7	X	131.83045	88.55287	34.95700	1.25972	0.0883187	0.19971330	2.8986652	20	6 16.1	21.0
343068 2009 CR ₃₅	15.7	X	319.62291	122.49312	111.74262	12.19516	0.1753254	0.18518855	3.0483158	20	3 8.8	19.7
343069 2009 CN ₃₉	15.0	X	24.44353	174.35648	329.39840	17.80752	0.0804494	0.17932351	3.1144252	20	2 20.5	19.0
343070 2009 CK ₄₉	14.6	X	120.89663	202.70566	5.59494	11.13989	0.1667423	0.12506273	3.9602029	20	9 18.6	20.7
343071 2009 CF ₅₆	16.4	X	237.88079	54.11139	93.50250	8.51259	0.1451029	0.23040876	2.6351381	20	11 10.9	20.0
343072 2009 CL ₅₆	16.6	X	196.81282	146.44765	193.67703	1.51950	0.0914474	0.18587064	3.0408536	20	2 28.9	21.4
343073 2009 CA ₅₇	15.6	X	84.58021	284.45717	187.38233	17.10911	0.1212164	0.18119736	3.0929161	20	4 12.2	19.8
343074 2009 CD ₅₈	16.0	X	122.23616	219.85150	178.39316	9.90613	0.0869225	0.17705072	3.1410215	20	2 20.1	20.7
343075 2009 CR ₅₈	16.3	X	98.90214	268.35439	156.93364	9.51582	0.0679147	0.17870627	3.1215923	20	2 23.9	20.6
343076 2009 CB ₅₉	16.1	X	356.79509	173.92369	352.86197	7.16307	0.0713337	0.17729217	3.1381692	20	2 11.9	20.1
343077 2009 CG ₆₂	15.8	X	93.96567	101.27757	309.15049	4.95184	0.0655302	0.17250631	3.1959457	20	1 31.6	20.3
343078 2009 CN ₆₃	15.4	X	85.01883	309.81163	140.49070	16.59218	0.0394981	0.17969915	3.1100834	20	3 6.6	19.7
343079 2009 CQ ₆₃	15.7	X	72.81026	83.22602	354.18857	11.37156	0.1981548	0.17415921	3.1756923	20	2 26.4	19.7
343080 2009 DH ₁	16.5	X	129.21570	336.78493	114.67091	3.36410	0.0601501	0.19373565	2.9579876	20	5 1.8	20.2
343081 2009 DB ₄	15.4	X	26.78706	320.60692	166.05263	28.18527	0.1697689	0.17958911	3.1113537	20	2 3.1	19.7
343082 2009 DT ₅	15.5	X	132.60035	145.35542	227.18517	14.96864	0.0825623	0.17353996	3.1832425	20	1 28.7	20.5
343083 2009 DD ₉	16.1	X	114.97807	127.26399	286.54359	4.09398	0.1421190	0.17874969	3.1210868	20	3 7.9	20.8
343084 2009 DQ ₉	16.4	X	83.63649	124.47826	4.86221	9.47693	0.2241410	0.19035399	2.9929173	20	5 13.6	20.7
343085 2009 DC ₁₃	15.8	X	104.16062	279.76911	200.70989	3.59929	0.1197802	0.19037158	2.9927330	20	5 15.8	20.1
343086 2009 DZ ₁₆	15.6	X	67.59659	126.43726	349.17640	11.24945	0.1094089	0.18223423	3.0811729	20	3 20.4	19.7
343087 2009 DH ₁₇	15.5	X	56.11066	166.43686	327.59897	9.25461	0.0786347	0.18332215	3.0689708	20	3 21.6	19.7
343088 2009 DR ₁₇	16.0	X	27.42826	219.50680	323.50749	5.89901	0.0369424	0.18689145	3.0297707	20	4 9.7	20.2
343089 2009 DK ₁₇	16.1	X	246.54900	112.77213	277.47340	11.57990	0.0951641	0.22060244	2.7126630	20	6 23.5	19.8
343090 2009 DO ₁₉	16.0	X	61.37204	149.32669	11.95276	10.71414	0.1123498	0.19324050	2.9630385	20	5 7.7	20.0
343091 2009 DE ₂₃	15.9	X	132.78782	326.02456	43.86600	2.51551	0.0902475	0.17104282	3.2141501	20	2 1.8	20.5
343092 2009 DD ₃₁	16.0	X	95.50738	276.53918	164.18683	11.68444	0.1081550	0.17736654	3.1372919	20	3 16.4	20.3
343093 2009 DR ₃₅	15.8	X	144.51818	261.48779	175.22477	7.68252	0.1845605	0.18937101	3.0032655	20	5 10.6	20.8
343094 2009 DT ₃₇	16.5	X	65.68856	318.54237	142.03207	6.22032	0.1222637	0.18044994	3.1014508	20	3 3.2	20.4
343095 2009 DS ₄₀	15.5	X	27.53965	174.02889	327.46134	16.98989	0.0316720	0.18058516	3.0999023	20	2 20.3	19.8
343096 2009 DH ₄₁	16.0	X	32.62830	174.48164	316.97489	4.09415	0.1039659	0.17992976	3.1074255	20	2 18.0	19.8
343097 2009 DN ₄₁	15.6	X	87.07627	74.13112	343.84720	8.70139	0.0866091	0.17635551	3.1492710	20	2 5.4	19.9
343098 2009 DV ₄₂	18.7	X	220.40365	343.86121	117.00587	19.92955	0.2752163	0.48017520	1.6151130	20	9 3.8	20.4
343099 2009 DJ ₄₃	15.6	X	45.35779	116.29605	345.66235	26.63472	0.1977555	0.17793725	3.1305800	20	2 17.6	19.3
343100 2009 DE ₅₇	15.9	X	63.58298	6.39071	104.14103	2.26722	0.1425474	0.18025996	3.1036294	20	3 15.6	19.7
343101 2009 DD ₆₀	15.9	X	32.11098	53.02109	13.10082	9.90955	0.0346123	0.15828777	3.3845776	20	—	—
343102 2009 DV ₆₂	15.9	X	58.40429	96.11465	21.03919	6.93197	0.2042724	0.18049636	3.1009190	20	3 25.0	19.5
343103 2009 DJ ₆₃	16.4	X	80.50573	123.71027	35.49991	6.05192	0.1716964	0.19241487	2.9715084	20	6 12.0	20.5
343104 2009 DV ₆₄	16.2	X	40.59974	153.12893	353.82189	2.78440	0.2188090	0.18015351	3.1048519	20	4 2.3	19.4
343105 2009 DX ₆₄	16.5	X	232.41909	306.24432	107.30392	10.92766	0.1959252	0.22264216	2.6960697	20	6 26.8	20.8
343106 2009 DT ₆₉	16.1	X	74.50624	129.03989	340.54595	1.14237	0.0630184	0.18204120	3.0833507	20	3 17.3	20.2
343107 2009 DA ₇₅	16.2	X	35.93772	10.43959	149.58853	7.77337	0.1161316	0.18317866	3.0705732	20	4 3.5	19.9
343108 2009 DS ₁₀₁	15.7	X	45.77077	348.71873	131.86324	9.93255	0.0593366	0.17442103	3.1725135	20	2 23.3	19.8
343109 2009 DV ₁₁₀	15.9	X	159.64280	138.12212	96.13616	15.93536	0.0773147	0.23195557	2.6234101	20	12 8.2	19.8
343110 2009 DV ₁₂₃	15.9	X	44.17889	219.23212	253.54642	4.17120	0.1146125	0.17437445	3.1730784	20	2 12.6	19.8
343111 2009 DZ ₁₂₅	16.5	X	85.27593	39.13545	63.21034	0.82496	0.1610853	0.18091518	3.0961314	20	4 6.0	20.7
343112 2009 DL ₁₂₆	16.6	X	200.87817	276.77047	187.12223	10.00748	0.3062552	0.21461505	2.7628837	20	7 23.2	21.7
343113 2009 DB ₁₂₈	16.0	X	106.06634	115.95698	186.156046	5.79118	0.1250984	0.18257448				

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343121 2009 <i>EW</i> ₁₃	15.6	X	30.88422	57.12190	94.14044	6.11866	0.0848954	0.17865146	3.1222308	20	3 14.4	19.6
343122 2009 <i>EH</i> ₁₅	16.2	X	105.85023	254.70583	155.43715	10.12671	0.1391907	0.17708273	3.1406430	20	2 24.0	20.6
343123 2009 <i>EV</i> ₁₆	15.9	X	112.37058	238.03168	182.99772	11.02091	0.0945324	0.17958029	3.1114555	20	3 8.4	20.4
343124 2009 <i>EA</i> ₁₇	16.1	X	8.72687	286.99568	200.18080	3.54652	0.0762976	0.16882856	3.2421923	20	1 9.9	20.4
343125 2009 <i>EE</i> ₁₇	16.1	X	92.61485	347.80927	102.27276	7.00383	0.1520774	0.18455409	3.0552982	20	4 1.7	20.4
343126 2009 <i>EQ</i> ₁₉	16.4	X	44.41405	336.37296	165.92534	1.74066	0.1150447	0.18450017	3.0558934	20	3 22.3	19.9
343127 2009 <i>EG</i> ₂₁	15.5	X	66.16844	315.89635	140.83926	9.50104	0.1028421	0.17530869	3.1617953	20	2 26.2	19.6
343128 2009 <i>EV</i> ₂₁	16.1	X	357.01553	353.96615	176.56039	10.76796	0.1563584	0.17683086	3.1436246	20	2 6.8	19.9
343129 2009 <i>ER</i> ₂₆	14.8	X	329.52664	198.45677	340.64360	16.14403	0.2973861	0.16492304	3.2931777	20	—	—
343130 2009 <i>EU</i> ₂₉	15.4	X	63.23893	103.27072	16.25940	14.65910	0.1552124	0.17703784	3.1411739	20	3 29.1	19.4
343131 2009 <i>EM</i> ₃₀	15.4	X	326.72454	263.63066	296.71550	12.93377	0.1470760	0.17197524	3.2025219	20	1 30.6	19.7
343132 2009 <i>FV</i>	15.6	X	37.57395	145.94075	6.81325	4.82591	0.0807653	0.17958838	3.1113621	20	3 22.9	19.4
343133 2009 <i>FY</i> ₁	15.8	X	87.27423	355.67187	108.90487	12.32360	0.0922127	0.18657778	3.0331654	20	4 6.9	20.2
343134 2009 <i>FG</i> ₅	16.0	X	80.56526	262.76252	178.92593	7.20954	0.1903016	0.17710409	3.1403905	20	3 9.0	20.2
343135 2009 <i>FS</i> ₁₃	15.6	X	108.16385	252.18077	184.09883	10.04359	0.0655989	0.18011325	3.1053146	20	3 18.8	20.0
343136 2009 <i>FF</i> ₂₄	15.7	X	91.04217	128.11967	22.68377	12.83655	0.0647429	0.19523327	2.9428412	20	5 27.3	20.0
343137 2009 <i>FA</i> ₂₅	15.5	X	2.92515	179.36560	24.68249	14.49134	0.1434770	0.18102639	3.0948632	20	4 5.4	19.0
343138 2009 <i>FG</i> ₃₂	16.0	X	63.93360	55.33476	61.95080	9.84742	0.0511627	0.17450115	3.1715424	20	3 17.7	20.4
343139 2009 <i>FE</i> ₃₄	15.2	X	241.29468	117.65226	155.17525	9.59096	0.0561787	0.16972689	3.2307420	20	1 29.3	20.1
343140 2009 <i>FL</i> ₃₅	15.4	X	281.09650	165.49565	82.31845	3.73746	0.0315492	0.17419056	3.1753112	20	2 18.1	19.9
343141 2009 <i>FB</i> ₃₇	15.9	X	90.97833	84.36906	42.97306	12.17245	0.1411872	0.18642411	3.0348320	20	5 10.5	20.3
343142 2009 <i>FE</i> ₄₀	16.4	X	89.77491	72.61738	50.02247	8.25886	0.1732211	0.18614654	3.0378482	20	5 8.5	20.7
343143 2009 <i>FP</i> ₄₁	15.8	X	68.43699	114.10365	31.66768	17.06585	0.0926796	0.18382262	3.0633979	20	4 27.0	19.9
343144 2009 <i>FG</i> ₄₂	15.6	X	92.92984	49.70963	34.52893	14.54456	0.2310905	0.17922981	3.1155105	20	4 5.9	20.1
343145 2009 <i>FO</i> ₄₂	15.6	X	66.72934	49.18505	44.65503	11.80101	0.1401365	0.17256448	3.1952274	20	3 4.9	19.9
343146 2009 <i>FF</i> ₅₅	16.5	X	57.68942	40.92750	116.16384	4.42359	0.2123778	0.18469035	3.0537952	20	5 16.7	20.3
343147 2009 <i>FV</i> ₆₇	16.0	X	90.93659	242.69482	189.60352	15.60545	0.1223076	0.17412951	3.1760535	20	2 28.4	20.6
343148 2009 <i>FF</i> ₆₉	14.8	X	358.34948	309.52135	190.59021	21.27420	0.0955174	0.16149049	3.3396792	20	1 9.1	19.6
343149 2009 <i>FC</i> ₇₃	16.0	X	62.36176	87.02607	35.77852	5.50256	0.1092641	0.18016071	3.1047693	20	3 25.5	19.9
343150 2009 <i>FX</i> ₇₃	15.9	X	175.54884	111.41015	20.41916	25.41198	0.1680008	0.21096945	2.7946216	20	8 26.5	20.9
343151 2009 <i>FR</i> ₇₆	15.4	X	57.84986	5.02319	56.16136	10.78176	0.0335970	0.15562702	3.4230459	20	—	—
343152 2009 <i>FV</i> ₇₆	15.5	X	15.66874	339.12673	195.10491	16.34679	0.1505935	0.17904111	3.1176992	20	3 15.9	19.1
343153 2009 <i>HY</i> ₁₅	15.4	X	90.16495	62.35128	60.81261	10.18313	0.0821323	0.18412200	3.0600764	20	4 28.7	19.7
343154 2009 <i>HN</i> ₁₈	15.8	X	76.16569	305.47811	172.76874	10.58631	0.2858320	0.18369668	3.0647979	20	5 5.0	20.1
343155 2009 <i>HY</i> ₃₉	15.9	X	71.55007	286.78053	155.32650	6.24192	0.0819864	0.16917922	3.2377107	20	2 12.4	20.1
343156 2009 <i>HP</i> ₆₆	16.5	X	58.70804	295.48950	183.64360	16.17852	0.2300063	0.17878472	3.1206791	20	3 31.6	20.3
343157 Mindaugas	15.7	X	67.66592	95.53173	55.87622	17.92356	0.1751780	0.18187142	3.0852692	20	5 16.8	19.7
343158 2009 <i>HC</i> ₈₂	16.2	X	316.80553	298.87702	295.40076	154.37105	0.8066987	0.24530578	2.5273431	20	2 23.4	21.1
343159 2009 <i>JD</i> ₁₇	12.9	X	242.54075	244.38450	82.22186	17.41055	0.0736201	0.08207391	5.2440397	20	4 15.7	20.2
343160 2009 <i>KS</i> ₂	14.8	X	112.72600	188.42184	63.88493	5.61687	0.0624113	0.12398951	3.9830225	20	10 22.7	20.6
343161 2009 <i>HK</i> ₃	13.4	X	287.33938	136.12829	176.44334	26.16056	0.1912169	0.08232733	5.2332727	20	4 27.9	20.4
343162 2009 <i>PY</i> ₄	17.7	X	1.22021	291.37731	323.34617	10.24047	0.0904189	0.34881200	1.9986731	20	6 11.5	19.3
343163 2009 <i>QA</i>	17.4	X	265.56011	284.52876	173.16181	22.53998	0.1142244	0.37260163	1.9126678	20	11 28.7	19.4
343164 2009 <i>QQ</i> ₄₈	17.5	X	205.95231	64.38228	344.40528	19.56551	0.0657898	0.34208835	2.0247770	20	5 28.4	20.6
343165 2009 <i>SK</i> ₁₀₂	17.1	X	128.90076	5.22038	229.51609	19.84177	0.0490862	0.36966203	1.9227943	20	12 2.5	19.2
343166 2009 <i>SO</i> ₁₀₃	17.3	X	220.83932	304.63769	194.67973	29.47775	0.6639776	0.34760752	2.0032875	20	8 30.9	21.8
343167 2009 <i>SW</i> ₁₂₅	17.6	X	131.88664	351.58631	338.33002	4.93283	0.2169967	0.30339049	2.1934854	20	—	—
343168 2009 <i>SU</i> ₁₅₈	17.7	X	263.19207	280.35490	270.56745	3.17152	0.0933776	0.29442544	2.2377891	20	—	—
343169 2009 <i>SV</i> ₁₉₂	17.8	X	105.34927	93.22925	212.29994	4.14412	0.1981336	0.29213539	2.2494686	20	—	—
343170 2009 <i>SC</i> ₁₉₉	17.9	X	291.32789	227.65913	347.39321	6.68429	0.1247358	0.31123395	2.1564766	20	—	—
343171 2009 <i>SQ</i> ₂₀₈	18.3	X	197.44483	5.49678	273.63509	1.08769	0.0847716	0.30541972	2.1837588	20	—	—
343172 2009 <i>SX</i> ₂₈₃	17.9	X	146.37918	148.59224	160.91362	6.53570	0.2181164	0.30339841	2.1934472	20	—	—
343173 2009 <i>SQ</i> ₃₂₆	17.7	X	108.95950	288.41470	69.34251	6.01941	0.2078829	0.29659896	2.2268432	20	—	—
343174 2009 <i>SH</i> ₃₃₃	12.4	X	317.75276	146.88250	240.55102	24.99804	0.0173690	0.08176965	5.2570400	20	9 6.2	19.6
343175 2009 <i>ST</i> ₃₃₈	17.7	X	125.03745	302.51795	39.37445	7.56603	0.2156833	0.30164350	2.2019463	20	—	—
343176 2009 <i>SZ</i> ₃₃₉	16.9	X	232.88613	342.80337	234.63412	9.99704	0.0774544	0.28505466	2.2865671	20	—	—
343177 2009 <i>TB</i> ₂₅	16.8	X	107.88686	272.23004	33.76216	24.69351	0.1771736	0.28927000	2.2642991	20	—	—
343178 2009 <i>TG</i> ₃₆	17.4	X	127.11207	281.29120	44.21429	7.37341	0.1909587	0.29798102	2.2199523	20	—	—
343179 2009 <i>UC</i> ₅₈	18.1	X	139.82145	332.85772	7.50881	2.43522	0.1532916	0.30355146	2.1927098	20	—	—
343180 2009 <i>UZ</i> ₇₀	17.8	X	127.53585	33.21162	349.49354	4.47357	0.1642233	0.30880519	2.1677689	20	2 2.7	20.3
343181 2009 <i>UB</i> ₈₄	17.7	X	178.39953	279.03508	81.30431	2.72346	0.1804765	0.31676700	2.1312910	20	2 28.9	20.9
343182 2009 <i>UD</i> ₈₅	18.3	X	88.70286	346.91892	75.13365	3.93267	0.1079685	0.30492965	2.1860979	20	1 23.1	20.3
343183 2009 <i>UU</i> ₈₈	18.1	X	114.56907	24.85593	346.91142	3.46825	0.2041198	0.30313159	2.1947341	20	1 7.5	20.4
343184 2009 <i>UH</i> ₉₆	17.6	X	310.99052	299.04154	199.94122	5.25237	0.1267894	0.28880011	2.2667545	20	—	—
343185 2009 <i>UV</i> ₁₀₂	17.2	X	187.38836	62.70973	310.12788	3.84542	0.0578545	0.31875554	2.1224179	20	3 17.3	19.8
343186 2009 <i>UG</i> ₁₁₁	17.5	X	216.77041	340.73837	229.63449	6.26508	0.0471607	0.28220858	2.3019148	20	—	—
343187 2009 <i>UO</i> ₁₁₆	17.4	X	191.00253	243.99111	351.55258	6.14487	0.1650146	0.28859182	2.2678450	20	—	—
343188 2009 <i>UT</i> ₁₄₄	17.6	X	167.90623	317.06679	20.97736	8.70195	0.1990071	0.30889071	2.1673688	20	1 24.9	20.9
343189 2009 <i>UO</i> ₁₄₆	17.3	X	156.75912	140.02722	218.34362	3.55515	0.0820730	0.21316481	2.7754008	20	2 5.6	21.4
343190 2009 <i>UE</i> ₁₄₈	17.3	X	137.61996	51.35679	225.80513	6.92525	0.2059214	0.28589252	2.2820974	20	—	—
343191 2009 <i>UF</i> ₁₅₄	17.1	X	356.34642	80.35040	354.56749	7.04841	0.0667579	0.28516726	2.2859652	20	—	—
343192 2009 <i>VK</i> ₁₅	17.6	X	157.71877	60.07647	262.30376	4.04535	0.1652					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343201 2009 VE ₆₁	17.0	X	135.55816	33.34696	244.30214	6.07466	0.2131008	0.28415800	2.2913748	20	—	—
343202 2009 VH ₆₇	17.8	X	147.91469	282.81766	24.67344	3.48963	0.1607280	0.29352518	2.2423624	20	—	—
343203 2009 VZ ₇₁	18.1	X	147.79206	3.16288	350.16127	4.76109	0.1832515	0.30669743	2.1776895	20	1 21.2	21.1
343204 2009 VW ₉₃	17.8	X	95.37009	246.12894	168.82456	2.42865	0.0481763	0.30533214	2.1841764	20	1 13.2	20.0
343205 2009 VQ ₉₄	18.0	X	21.04961	84.84411	30.66698	4.67267	0.0755362	0.29864134	2.2166788	20	—	—
343206 2009 VC ₁₀₀	17.5	X	230.25906	198.45447	41.76579	6.08427	0.1061553	0.29089651	2.2558508	20	—	—
343207 2009 VR ₁₀₅	17.8	X	48.02830	206.26522	235.85277	3.85378	0.1382253	0.29993473	2.2103016	20	—	—
343208 2009 VG ₁₀₈	18.0	X	56.44880	203.85626	261.57561	1.37261	0.0912951	0.30747499	2.1740166	20	1 27.9	19.9
343209 2009 VT ₁₁₄	17.9	X	354.28030	45.91844	28.38307	2.55711	0.1480827	0.27499642	2.3419881	20	—	—
343210 2009 WG ₁	18.3	X	114.94331	237.11075	141.61484	3.23966	0.1428352	0.30232889	2.1986172	20	1 7.0	20.6
343211 2009 WV ₂₀	17.7	X	61.09053	235.08741	144.79910	3.07713	0.1698033	0.28837955	2.2689578	20	—	—
343212 2009 WK ₂₇	17.7	X	319.82820	99.01691	51.46816	5.25144	0.0760359	0.29227263	2.2487644	20	—	—
343213 2009 WD ₂₈	17.8	X	334.07409	124.59423	55.76282	5.62633	0.0855577	0.30293517	2.1956827	20	—	—
343214 2009 WF ₃₄	15.7	X	282.24357	29.83263	79.74957	10.37531	0.0479210	0.17552940	3.1591444	20	11 21.6	20.0
343215 2009 WX ₃₆	17.2	X	234.77807	275.84920	262.92769	5.12982	0.0913351	0.27592624	2.3367238	20	—	—
343216 2009 WC ₃₇	17.8	X	104.32404	64.63820	282.15132	3.26839	0.0686235	0.28951930	2.2629990	20	—	—
343217 2009 WL ₃₇	17.6	X	267.93146	352.45099	296.86222	2.30695	0.1454571	0.31816140	2.1250593	20	2 22.1	20.3
343218 2009 WR ₃₇	17.8	X	80.88293	153.44592	262.65765	5.19595	0.1389281	0.30017509	2.2091216	20	1 4.6	19.6
343219 2009 WW ₄₃	16.8	X	247.89343	216.24905	295.80893	4.29983	0.0893757	0.26165111	2.4209603	20	12 13.8	19.7
343220 2009 WF ₄₄	18.1	X	192.54549	272.19865	0.71462	5.39689	0.1169828	0.29746848	2.2250516	20	—	—
343221 2009 WN ₄₅	18.0	X	152.87215	160.79088	189.99300	2.55077	0.1682660	0.30689539	2.1767530	20	1 19.8	21.0
343222 2009 WD ₈₀	17.4	X	64.68885	90.91394	286.40862	6.24497	0.1082539	0.28602471	2.2813943	20	—	—
343223 2009 WR ₈₂	17.3	X	161.71128	359.69937	330.67702	4.75010	0.2384678	0.30690700	2.1766981	20	1 11.0	20.6
343224 2009 WO ₈₂	17.9	X	160.87924	353.39038	337.71005	4.34252	0.1554632	0.30433571	2.1889413	20	1 2.9	20.8
343225 2009 WR ₈₃	17.4	X	185.65479	285.55946	26.29508	7.20525	0.2465586	0.30844676	2.1694480	20	1 9.5	21.0
343226 2009 WW ₈₄	17.1	X	136.59367	222.12160	24.89757	8.26417	0.1770094	0.27104577	2.3646904	20	12 2.8	21.0
343227 2009 WA ₈₈	17.6	X	173.89250	333.89200	326.38880	3.28346	0.2199033	0.29928224	2.2135130	20	—	—
343228 2009 WK ₈₈	17.8	X	222.08587	352.94414	213.75410	4.33342	0.1086446	0.27871944	2.3210859	20	—	—
343229 2009 WN ₈₉	16.8	X	146.50577	178.44632	121.04630	4.40576	0.0601888	0.19293102	2.9662062	20	—	—
343230 Corsini	17.0	X	291.27156	330.11136	105.18081	6.08450	0.1560158	0.25969620	2.4330946	20	10 31.4	19.3
343231 2009 WS ₁₁₉	17.9	X	8.76221	319.55683	244.81622	2.65247	0.0542988	0.31965911	2.1184164	20	4 1.7	19.7
343232 2009 WA ₁₂₁	17.9	X	260.68236	356.92720	251.34729	2.67078	0.0879075	0.30386878	2.1911831	20	—	—
343233 2009 WV ₁₂₃	17.5	X	302.43289	148.97058	112.35624	1.25656	0.0550133	0.31766012	2.1272943	20	3 13.3	19.5
343234 2009 WP ₁₂₈	17.9	X	134.95897	210.16553	184.40651	0.81434	0.1328844	0.31129522	2.1561936	20	2 22.1	20.3
343235 2009 WK ₁₃₀	17.5	X	185.36068	338.43490	282.25967	2.64747	0.1382565	0.29004744	2.2602511	20	—	—
343236 2009 WZ ₁₃₂	17.7	X	190.96854	116.80130	209.11063	3.08670	0.1224893	0.30928934	2.1655061	20	1 23.1	20.6
343237 2009 WL ₁₃₇	17.8	X	45.89663	204.66436	220.06582	4.81594	0.0890260	0.29444154	2.2377076	20	—	—
343238 2009 WY ₁₆₂	17.8	X	244.16853	207.57759	59.78363	4.76093	0.0824939	0.30400082	2.1905485	20	1 5.5	20.7
343239 2009 WY ₁₈₄	17.3	X	91.79088	296.12415	81.07979	10.05228	0.1101386	0.29415195	2.2391760	20	—	—
343240 2009 WB ₁₈₉	18.0	X	136.35595	307.09914	57.00343	6.40504	0.1988097	0.30608396	2.1805983	20	1 25.1	20.8
343241 2009 WW ₁₉₂	17.7	X	322.35806	104.06980	40.33596	4.03389	0.1042442	0.29113901	2.2545980	20	—	—
343242 2009 WM ₁₉₅	18.2	X	7.06885	216.38287	264.92862	3.89436	0.0800979	0.29802943	2.2197119	20	—	—
343243 2009 WX ₂₀₀	18.4	X	294.40396	6.19474	169.57064	2.61379	0.0397377	0.29067940	2.2569739	20	—	—
343244 2009 WP ₂₀₉	18.1	X	347.34813	20.47411	93.35030	2.97219	0.1782111	0.28449612	2.2895589	20	—	—
343245 2009 WF ₂₁₆	17.7	X	70.06728	184.49828	203.25213	5.74793	0.0949223	0.29347270	2.2426297	20	—	—
343246 2009 WN ₂₁₈	17.4	X	337.66830	85.37854	46.78121	6.85587	0.1019206	0.29117246	2.2544253	20	—	—
343247 2009 WE ₂₄₁	18.0	X	125.08522	215.68044	176.15384	3.51212	0.0998277	0.30565647	2.1826310	20	1 31.6	20.6
343248 2009 WV ₂₆₁	17.4	X	315.25470	198.01157	289.65794	1.92364	0.1430230	0.28033851	2.3121404	20	—	—
343249 2009 XL ₇	16.8	X	224.12171	26.12641	122.34331	6.34093	0.0654989	0.25792743	2.4442054	20	11 11.7	20.0
343250 2009 XV ₈	17.2	X	43.82520	233.08150	175.56614	6.28710	0.0965744	0.28733979	2.2744281	20	—	—
343251 2009 XH ₉	18.1	X	79.86816	55.83773	348.98983	4.83898	0.1298650	0.29744524	2.2226174	20	—	—
343252 2009 XL ₁₅	18.1	X	354.70947	171.06127	269.54025	2.14724	0.2098494	0.27829528	2.3234437	20	—	—
343253 2009 XD ₁₇	16.9	X	235.33847	285.06929	281.08374	11.22125	0.1530477	0.27116966	2.3639701	20	—	—
343254 2009 XU ₁₇	17.7	X	260.23000	102.60337	44.55048	2.00934	0.1359416	0.26527536	2.3988593	20	12 20.5	20.1
343255 2009 XK ₂₁	17.0	X	359.30771	293.40418	98.88626	7.28129	0.1439829	0.26878049	2.3779583	20	—	—
343256 2009 XN ₂₂	18.5	X	76.38476	42.55864	44.07562	2.17018	0.1774317	0.30002141	2.2098759	20	2 20.0	20.4
343257 2009 XO ₂₂	16.7	X	138.83754	96.29074	84.00806	6.71623	0.1226096	0.24053101	2.5606802	20	9 13.2	20.7
343258 2009 XC ₂₅	16.2	X	162.07074	232.68330	264.05073	9.89428	0.1937362	0.23476620	2.6024296	20	8 4.5	20.7
343259 2009 YZ ₅	16.2	X	347.19198	306.98760	305.73595	7.53597	0.1114233	0.22007883	2.7169639	20	5 9.1	19.5
343260 2009 YW ₁₄	16.7	X	12.53679	147.48815	70.22440	5.89298	0.0806024	0.21868023	2.7285361	20	5 7.7	19.9
343261 2009 YP ₁₅	17.5	X	37.20210	11.59666	82.67787	6.60868	0.0553958	0.29605592	2.2295654	20	—	—
343262 2009 YC ₂₀	16.9	X	286.19375	125.38315	301.85535	5.19413	0.0741169	0.25541151	2.4602301	20	10 13.2	19.8
343263 2009 YU ₂₁	16.5	X	128.47351	161.68421	323.67338	10.46038	0.1424768	0.22620070	2.6677190	20	6 20.6	20.7
343264 2009 YZ ₂₁	16.4	X	230.24236	241.52918	278.27725	14.36530	0.0544731	0.26271931	2.4143935	20	12 5.2	19.6
343265 2009 YZ ₂₃	17.3	X	90.34990	278.60363	85.81508	7.62505	0.1388305	0.28488764	2.2874607	20	—	—
343266 2009 YK ₂₄	17.3	X	240.99453	207.81514	298.52801	5.75637	0.0548534	0.26079660	2.4262456	20	11 30.7	20.3
343267 2009 YO ₂₄	18.2	X	34.25378	199.34242	259.57617	2.06053	0.0844152	0.29134641	2.2535279	20	—	—
343268 2009 YX ₂₄	16.5	X	24.14898	327.08226	304.35809	14.33932	0.1213505	0.23575910	2.5951178	20	8 14.2	19.5
343269 2009 YP ₂₅	16.6	X	134.49457	231.80871	314.58343	11.87228	0.0454990	0.24042479	2.5614343	20	9 5.4	20.3
343270 2010 AE ₁	17.7	X	282.50137	223.16466	249.43527	0.83248	0.1331400	0.26369317	2.4084454	20	12 9.9	19.9
343271 2010 AS ₆	17.6	X	285.25355	349.44181	151.07631	5.72552	0.1763870	0.27069509	2.3667323	20	—	—
343272 2010 AG ₉	17.7	X	335.00793	197.96501	255.85827	1.44736	0.1880007	0.27423743	2.3463073	20	—	—
343273 2010 AH ₁₂	17.7	X	48.90073	288.38644	127.77384	4.45843	0.2029967	0.28392055	2.2926521	20	—	—
343274 2010 AL ₁₇	17.1	X	59.56784	241.14991	95.19174	6.81887	0.1972050	0.27081644	2.3660252	20	—	—
343275 2010 AC ₂₅	15.8	X	359.76024	344.71791	31.914478	11						

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343281 2010 AF ₃₈	17.2	X	269.63882	120.20865	7.81142	2.54768	0.1696374	0.26102609	2.4248233	20	12 2.5	19.6
343282 2010 AX ₄₀	17.1	X	271.11676	28.80898	112.94836	5.60816	0.1685758	0.26350331	2.4096021	20	12 27.0	19.1
343283 2010 AW ₄₁	16.9	X	337.24917	25.68716	139.78748	6.29674	0.1013017	0.29016744	2.2596279	20	—	—
343284 2010 AE ₄₃	16.4	X	93.93165	124.68056	75.32498	6.77237	0.0736537	0.23568040	2.5956955	20	8 13.6	20.0
343285 2010 AT ₄₃	17.2	X	293.39636	239.70827	238.96986	1.97405	0.1394885	0.26504980	2.4002201	20	—	—
343286 2010 AA ₄₄	15.8	X	271.22968	249.31601	314.73272	14.83349	0.2024789	0.17812461	3.1283843	20	—	—
343287 2010 AL ₄₅	16.8	X	50.73784	308.15128	301.89312	7.86762	0.1269079	0.23833918	2.5763553	20	8 27.3	20.1
343288 2010 AV ₅₄	17.1	X	316.50854	86.39571	7.55600	3.24812	0.1411403	0.26587142	2.3952726	20	—	—
343289 2010 AG ₆₃	18.0	X	27.99397	281.74344	168.04967	3.22226	0.1691104	0.28735501	2.2743478	20	—	—
343290 2010 AU ₆₃	15.9	X	120.90595	99.51287	114.07347	10.79402	0.0453850	0.24070299	2.5594603	20	10 4.5	19.6
343291 2010 AD ₆₇	16.9	X	288.12435	17.93714	123.05472	6.77751	0.0496954	0.27662090	2.3328101	20	—	—
343292 2010 AE ₆₇	17.5	X	160.90398	268.84511	105.14404	4.03130	0.1920609	0.31108744	2.1571536	20	3 2.4	20.6
343293 2010 AB ₆₈	17.9	X	26.24132	303.35620	147.08109	3.52170	0.1363834	0.28690117	2.2767456	20	—	—
343294 2010 AK ₆₈	17.2	X	42.02895	250.96966	149.30468	9.40948	0.2012882	0.28005609	2.3136946	20	—	—
343295 2010 AG ₇₀	16.8	X	315.06984	117.25538	334.07827	11.33052	0.1194663	0.26737364	2.3862924	20	—	—
343296 2010 AO ₇₀	17.4	X	46.24491	122.87449	351.03451	6.06736	0.1284493	0.29624341	2.2286246	20	1 28.6	19.2
343297 2010 AN ₇₃	17.4	X	356.35253	47.89227	82.53212	6.70597	0.1564226	0.28328193	2.2960965	20	—	—
343298 2010 AN ₇₆	16.5	X	232.26138	132.34242	12.11045	6.19006	0.0735764	0.25794136	2.4441174	20	11 11.7	19.6
343299 2010 AC ₇₇	16.5	X	240.61281	356.82040	131.55495	7.05885	0.0972123	0.25551444	2.4595694	20	11 2.1	19.7
343300 2010 AD ₇₇	16.3	X	87.97442	233.90610	290.32012	10.71005	0.1384956	0.22346839	2.6894201	20	6 25.0	20.0
343301 2010 AR ₈₁	15.4	X	301.78682	296.84936	253.78386	12.21822	0.0590113	0.17797904	3.1300898	20	—	—
343302 2010 AE ₈₉	16.7	X	160.67870	320.23996	143.18839	5.09741	0.0249244	0.21423107	2.7661841	20	6 20.5	20.5
343303 2010 AO ₉₅	15.8	X	308.06881	124.91251	87.56141	7.53002	0.0904528	0.18432023	3.0578819	20	1 29.5	20.1
343304 2010 AC ₁₀₆	16.9	X	146.56586	293.08280	221.47235	8.85576	0.1051288	0.22406681	2.6846295	20	8 9.9	21.1
343305 2010 AJ ₁₁₀	16.0	X	173.25559	6.64006	347.36140	6.70212	0.0785322	0.18564998	3.0432627	20	2 22.7	20.5
343306 2010 AG ₁₁₅	15.4	X	78.44256	59.64970	352.20671	22.22288	0.0217605	0.17637110	3.1490854	20	1 14.5	20.2
343307 2010 AQ ₁₂₀	15.6	X	91.32975	44.97004	333.59710	14.16593	0.0263210	0.17032708	3.2231480	20	—	—
343308 2010 BN ₃	17.8	X	56.86749	28.19243	49.99422	3.70958	0.1262862	0.29163491	2.2520414	20	—	—
343309 2010 BZ ₃	18.0	X	84.07328	282.31258	117.50024	4.73386	0.1744533	0.29104506	2.2550831	20	—	—
343310 2010 BD ₅	16.0	X	30.00944	253.07717	329.53289	13.33145	0.0372870	0.22108873	2.7086838	20	6 5.7	19.8
343311 2010 BM ₆	17.2	X	236.74472	46.89470	130.52793	1.98366	0.1258455	0.26263442	2.4149137	20	12 26.8	20.2
343312 2010 BH ₂₈	15.4	X	281.54397	356.16884	52.38288	20.48073	0.2328958	0.23396253	2.6083859	20	8 26.2	19.0
343313 2010 BX ₄₀	16.0	X	6.29131	0.34163	158.53388	9.57137	0.0758829	0.18525275	3.0476116	20	2 11.4	19.8
343314 2010 BC ₅₇	15.6	X	206.02473	260.92796	41.47786	15.69237	0.0806258	0.17678884	3.1441227	20	1 31.5	20.7
343315 2010 BK ₆₁	15.8	X	149.10191	131.11266	214.37641	17.54101	0.0850394	0.17378704	3.1802245	20	1 15.8	20.9
343316 2010 BU ₆₈	16.3	X	186.88083	229.73124	161.04126	7.20159	0.0795776	0.19772609	2.9180545	20	4 21.7	20.7
343317 2010 BV ₇₁	15.2	X	189.66050	225.64373	98.99489	19.62358	0.1396426	0.17681814	3.1437754	20	2 8.8	20.5
343318 2010 BS ₇₃	16.0	X	231.15182	121.63283	185.89946	2.24004	0.1048554	0.18356366	3.0662783	20	2 23.9	20.7
343319 2010 BD ₇₆	16.8	X	352.25337	213.90251	59.06097	5.31275	0.0273431	0.20871731	2.8146889	20	6 20.3	20.4
343320 2010 BF ₈₄	15.3	X	48.34469	88.00710	277.89272	7.80056	0.0485368	0.15146272	3.4855034	20	12 22.7	20.2
343321 2010 BM ₉₆	17.4	X	259.55549	257.25063	290.97563	2.32012	0.0876984	0.28926604	2.2643198	20	—	—
343322 Toms-kuniver	16.0	X	79.71591	175.34386	230.78320	11.68354	0.1158369	0.21304670	2.7764265	20	4 27.8	20.0
343323 2010 CP ₁	17.0	X	314.48964	246.87595	323.69353	5.65889	0.0622254	0.26852404	2.3794720	20	—	—
343324 2010 CE ₃	17.4	X	291.22001	320.85705	127.81313	5.62602	0.0415947	0.25397020	2.4695294	20	11 26.7	20.5
343325 2010 CS ₃	17.5	X	296.13071	121.75576	16.31003	3.33567	0.1380211	0.26777017	2.3839360	20	—	—
343326 2010 CK ₆	15.3	X	137.97704	229.26999	129.15951	19.76922	0.0796703	0.17076251	3.2176664	20	1 22.9	20.0
343327 2010 CL ₈	16.8	X	216.56116	317.88169	201.39710	7.41966	0.2194997	0.24204310	2.5500043	20	10 23.0	20.6
343328 2010 CH ₉	16.0	X	153.22631	58.96636	87.90674	15.22327	0.0983141	0.21887252	2.7269377	20	8 13.9	20.4
343329 2010 CX ₁₄	15.8	X	152.18326	1.17716	30.33165	14.15263	0.0759704	0.18359036	3.0659811	20	3 20.6	20.5
343330 2010 CH ₁₇	15.8	X	146.08656	155.05224	52.01472	27.02145	0.1901936	0.23154330	2.6265231	20	10 27.1	20.4
343331 2010 CY ₁₉	16.9	X	296.22733	148.44913	304.49837	5.40333	0.0545166	0.26281068	2.4138339	20	12 10.1	19.6
343332 2010 CY ₂₂	16.9	X	315.02647	342.96109	345.07735	4.38471	0.0459264	0.22424920	2.6831736	20	7 12.1	20.2
343333 2010 CA ₂₉	17.0	X	240.49070	331.46534	115.70989	3.92548	0.1949275	0.24067322	2.5596713	20	8 20.0	20.5
343334 2010 CE ₃₂	16.2	X	221.98854	300.07115	160.80348	14.36758	0.0600657	0.23376503	2.6098548	20	8 31.7	19.7
343335 2010 CN ₃₂	15.8	X	248.50956	38.27704	173.96378	6.43060	0.0656005	0.17042047	3.2219704	20	—	—
343336 2010 CJ ₃₅	16.9	X	295.65905	13.27852	67.33804	5.17012	0.1937830	0.25507928	2.4623660	20	11 9.6	18.8
343337 2010 CY ₃₅	15.7	X	239.08930	127.29655	143.00693	12.17087	0.0897629	0.18601131	3.0393203	20	1 19.9	20.5
343338 2010 CH ₃₆	16.2	X	92.19031	239.34996	356.03022	12.25103	0.0639117	0.23474807	2.6025637	20	9 23.0	19.8
343339 2010 CO ₃₉	17.8	X	328.32090	47.63879	52.02640	2.65371	0.1527250	0.26507137	2.4000899	20	—	—
343340 2010 CE ₄₁	17.3	X	280.64013	258.92089	266.82624	1.32196	0.1596707	0.27138966	2.3626924	20	—	—
343341 2010 CE ₄₂	16.9	X	31.85115	86.95270	322.95237	11.23691	0.1643147	0.27583667	2.3372296	20	—	—
343342 2010 CK ₄₂	17.4	X	295.34627	247.48165	247.36267	0.59782	0.1276709	0.26738918	2.3861999	20	—	—
343343 2010 CJ ₄₈	15.9	X	350.65597	322.72310	205.56502	10.65099	0.0947552	0.17886745	3.1197168	20	1 28.9	20.1
343344 2010 CX ₅₅	16.9	X	253.62401	266.82487	226.76632	5.35724	0.1314591	0.25887124	2.4382609	20	11 20.2	19.6
343345 2010 CQ ₅₆	15.9	X	89.04069	268.79203	291.92372	10.31325	0.1182063	0.22868935	2.6483300	20	8 8.8	19.8
343346 2010 CF ₅₇	15.2	X	279.37618	222.15029	352.16115	19.56452	0.1786446	0.17992498	3.1074805	20	—	—
343347 2010 CF ₅₉	16.5	X	127.18629	7.05067	156.77284	13.16056	0.0979996	0.22941047	2.6427772	20	8 3.2	20.5
343348 2010 CR ₅₉	15.8	X	197.75394	263.94569	157.02879	21.91145	0.0744330	0.22341683	2.6898339	20	6 11.8	20.3
343349 2010 CK ₆₀	16.7	X	210.73946	302.26301	168.82106	8.89238	0.1195289	0.23912792	2.5706870	20	8 24.9	20.5
343350 2010 CL ₆₀	17.0	X	283.99860	318.78899	177.97131	4.00982	0.1822720	0.26464254	2.4026819	20	—	—
343351 2010 CS ₆₁	15.8	X	256.72115	231.98792	352.69262	7.35498	0.1020555	0.17854948	3.1234196	20	—	—
343352 2010 CR ₆₂	16.7	X	316.20814	268.10892	349.82337	7.59264	0.0358702	0.20537229	2.8451695	20	4 7.6	20.6
343353 2010 CG ₆₃	17.7	X	330.47636	117.87569	20.99544	1.94563	0.1323368	0.27570243	2.3379882	20	—	—
343354 2010 CO ₆₆	16.6	X	347.52210	286.57365	345.65567	7.95079	0.0654152	0.22060922	2.7126074	20	6 10.9</	

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343361 2010 CR ₈₁	16.2	X	266.51530	12.84306	322.39333	3.54376	0.0818840	0.21315201	2.7755119	20	5 6.8	20.1
343362 2010 CS ₈₁	16.3	X	206.72865	359.44632	305.28581	1.36334	0.0878470	0.18777283	3.0202824	20	1 28.4	21.0
343363 2010 CK ₈₂	16.7	X	275.69823	343.66387	321.52242	1.17355	0.0523141	0.20343119	2.8632396	20	4 14.9	20.6
343364 2010 CZ ₈₃	17.6	X	330.26393	308.30491	150.88289	1.73770	0.1511098	0.26861978	2.3789066	20	—	—
343365 2010 CE ₈₄	16.9	X	130.36180	129.22948	340.85246	6.80057	0.1153791	0.21664408	2.7456057	20	5 29.4	21.2
343366 2010 CG ₈₇	16.7	X	5.74259	130.74859	137.40972	5.75770	0.1524090	0.22321093	2.6914877	20	7 10.1	19.3
343367 2010 CY ₈₈	16.5	X	359.28499	355.53559	272.41511	3.96024	0.1210359	0.22085234	2.7106163	20	6 25.7	19.4
343368 2010 CH ₉₁	17.9	X	336.58909	235.63790	186.69283	2.51613	0.1603413	0.26383069	2.4076084	20	—	—
343369 2010 CU ₉₃	17.6	X	284.84357	89.10727	16.84068	4.90320	0.1563217	0.25602498	2.4562986	20	11 28.1	19.9
343370 2010 CS ₉₄	16.6	X	308.89638	203.73798	149.70477	4.92101	0.1257117	0.22864850	2.6486453	20	7 28.1	19.7
343371 2010 CH ₉₅	16.2	X	213.26045	135.01585	151.43411	5.40657	0.0969121	0.18150227	3.0894512	20	1 13.8	21.0
343372 2010 CN ₉₆	16.5	X	273.88286	265.25567	49.70723	0.64743	0.0650738	0.21338739	2.7734705	20	4 23.5	20.2
343373 2010 CC ₁₀₈	15.4	X	198.55357	318.92582	357.29514	17.00592	0.0711522	0.18524383	3.0477093	20	2 9.0	20.2
343374 2010 CV ₁₀₈	17.2	X	215.62270	142.85800	321.87875	4.74805	0.0542176	0.23884817	2.5726938	20	8 29.6	20.5
343375 2010 CF ₁₁₇	15.9	X	206.65421	294.87622	2.29924	10.87310	0.0559907	0.18190441	3.0848963	20	1 23.7	20.6
343376 2010 CD ₁₂₂	16.0	X	348.99458	94.72801	137.49565	3.38164	0.1722580	0.20247744	2.8722239	20	4 14.0	18.9
343377 2010 CN ₁₂₅	16.5	X	333.25388	321.51901	22.63507	3.89512	0.0941454	0.23066838	2.6331605	20	9 1.2	19.3
343378 2010 CN ₁₂₇	16.2	X	260.63627	180.01226	184.62314	12.21333	0.1332863	0.21704009	2.7422649	20	6 2.7	20.3
343379 2010 CO ₁₂₉	16.9	X	259.81528	329.44939	174.98371	8.24889	0.1938416	0.25840475	2.4411945	20	12 5.9	19.7
343380 2010 CE ₁₃₃	15.5	X	169.87100	279.62449	87.37906	5.57750	0.0660031	0.18044244	3.1015367	20	3 7.2	20.2
343381 2010 CW ₁₃₅	15.6	X	54.01768	2.60228	116.21185	11.95803	0.0562628	0.18177839	3.0863219	20	3 4.4	19.8
343382 2010 CK ₁₃₈	17.7	X	303.58070	325.82618	192.25083	1.73154	0.1604890	0.27294070	2.3537329	20	—	—
343383 2010 CO ₁₃₉	18.0	X	15.20462	118.64495	323.28741	4.78902	0.1919583	0.27870709	2.3211545	20	—	—
343384 2010 CH ₁₄₁	16.9	X	349.52172	295.38081	2.89033	2.44425	0.0900457	0.22916908	2.6446327	20	7 23.7	19.8
343385 2010 CA ₁₄₂	17.3	X	317.50668	215.02830	317.21975	5.32095	0.0970904	0.28512794	2.2861753	20	—	—
343386 2010 CA ₁₄₈	16.6	X	92.40446	186.22321	358.56264	13.72826	0.2373500	0.21790647	2.7349914	20	8 12.7	21.0
343387 2010 CA ₁₄₉	16.6	X	2.67287	329.10752	116.73672	2.77928	0.1966164	0.27897300	2.3196792	20	—	—
343388 2010 CN ₁₄₉	17.7	X	305.93175	180.97279	135.17586	3.11220	0.1981565	0.21747145	2.7386375	20	5 19.8	20.0
343389 2010 CZ ₁₅₂	17.1	X	329.94885	183.33908	80.34753	0.85851	0.0198737	0.21486345	2.7607538	20	5 7.9	20.7
343390 2010 CN ₁₅₃	16.6	X	203.43871	263.73375	158.78848	4.11594	0.0800165	0.21937225	2.7227948	20	6 17.0	20.7
343391 2010 CR ₁₅₃	18.0	X	303.31611	320.77244	154.44040	3.36755	0.1377938	0.26166976	2.4208452	20	—	—
343392 2010 CZ ₁₅₄	18.1	X	27.52148	36.09943	60.17040	2.08838	0.1822613	0.28571410	2.2830474	20	—	—
343393 2010 CE ₁₅₆	16.8	X	33.09804	209.17441	355.42106	7.37803	0.1515328	0.20941993	2.8083897	20	5 27.8	20.1
343394 2010 CU ₁₆₁	15.2	X	253.15567	262.83060	335.66516	14.71746	0.1750685	0.17645319	3.1481086	20	—	—
343395 2010 CR ₁₆₃	16.4	X	262.61260	20.57958	353.87371	5.62143	0.0265462	0.21956281	2.7212193	20	7 3.8	20.1
343396 2010 CH ₁₆₄	17.5	X	243.47187	168.62951	37.50746	2.15103	0.1242040	0.26999659	2.3708124	20	—	—
343397 2010 CN ₁₆₆	17.2	X	190.61840	274.15434	202.53858	1.92205	0.0469825	0.22956408	2.6415982	20	8 14.3	20.9
343398 2010 CO ₁₆₈	16.1	X	21.33167	318.46291	186.92002	10.09020	0.0396739	0.19057760	2.9905758	20	2 14.1	20.2
343399 2010 CE ₁₇₀	15.7	X	239.52059	237.93761	357.66596	12.25320	0.1103131	0.17668048	3.1454082	20	—	—
343400 2010 CN ₁₇₀	17.2	X	142.45288	279.91512	223.27858	0.87188	0.0757589	0.22471198	2.6794885	20	7 23.6	21.0
343401 2010 CR ₁₇₀	16.4	X	26.38164	350.97368	284.20552	2.28672	0.0502800	0.22552923	2.6730115	20	8 14.9	19.8
343402 2010 CV ₁₇₀	16.9	X	264.12745	18.66637	343.89742	5.67673	0.0442035	0.22036715	2.7145935	20	6 15.9	20.6
343403 2010 CY ₁₇₀	16.3	X	285.14982	14.46617	350.57150	4.88576	0.0699218	0.22319209	2.6916392	20	7 16.2	19.8
343404 2010 CO ₁₇₂	17.2	X	91.67403	218.09261	356.48926	2.94018	0.1650232	0.23056091	2.6339787	20	9 7.6	21.0
343405 2010 CL ₁₇₂	17.1	X	324.25301	152.02972	193.10221	4.91637	0.0255401	0.22750901	2.6574819	20	8 18.0	20.6
343406 2010 CB ₁₇₅	15.9	X	207.00484	93.42382	348.78005	7.87442	0.0487666	0.22758886	2.6568603	20	7 21.8	19.7
343407 2010 CR ₁₇₅	17.8	X	278.42610	47.07946	102.39826	3.63417	0.1258128	0.26287068	2.4134666	20	—	—
343408 2010 CO ₁₇₆	16.7	X	227.03616	53.56644	330.83510	10.91600	0.0689307	0.21986947	2.7186888	20	5 23.2	20.8
343409 2010 CY ₁₇₆	16.1	X	321.76963	24.61719	326.63430	11.31698	0.1984996	0.23618970	2.5919627	20	8 13.3	18.3
343410 2010 CT ₁₈₀	15.6	X	217.51903	299.58725	328.04238	11.40062	0.1222947	0.17995515	3.1071332	20	—	—
343411 2010 CU ₁₈₀	16.4	X	71.15634	50.62926	142.36883	8.97830	0.0530631	0.22052003	2.7133387	20	6 27.8	20.1
343412 2010 CC ₁₈₁	16.6	X	356.00578	15.28862	165.72725	17.24797	0.1394001	0.19518686	2.9433077	20	2 17.5	20.1
343413 2010 CX ₁₈₁	17.3	X	115.47122	250.37867	256.57239	1.81720	0.0238039	0.22096137	2.7097246	20	6 20.4	20.7
343414 2010 CH ₁₈₄	16.2	X	128.05053	204.77684	344.95954	33.30374	0.2228775	0.23310423	2.6147848	20	9 11.4	20.6
343415 2010 CL ₁₈₄	16.1	X	27.72599	57.81809	154.72915	9.19328	0.0388519	0.21526203	2.7573449	20	5 23.5	19.8
343416 2010 CR ₂₀₆	16.4	X	56.46539	251.29322	220.03872	8.17776	0.1104819	0.18374945	3.0642111	20	2 26.1	20.4
343417 2010 CE ₂₄₈	16.5	X	341.54091	131.55410	129.77260	8.96283	0.0670998	0.21853051	2.7297822	20	5 20.6	20.0
343418 2010 DV ₁	15.9	X	187.99712	315.08437	185.92883	32.20083	0.2407263	0.23248213	2.6194473	20	8 30.9	20.7
343419 2010 DD ₄	17.8	X	341.93357	85.94359	348.73832	2.12984	0.1935154	0.27040761	2.3684094	20	—	—
343420 2010 DY ₆	16.5	X	112.61196	116.89646	348.68962	5.66113	0.0052109	0.20580732	2.8411588	20	4 18.3	20.5
343421 2010 DN ₈	16.8	X	32.69535	289.51123	324.01628	4.10165	0.1140041	0.22011670	2.7166523	20	8 3.3	19.9
343422 2010 DQ ₈	16.6	X	170.05242	357.84905	170.62313	11.22227	0.0458343	0.23779242	2.5803030	20	9 29.8	20.1
343423 2010 DF ₁₆	15.2	X	359.85962	317.83730	265.65277	27.60221	0.1834531	0.22497167	2.6774261	20	4 8.3	18.6
343424 2010 DV ₁₇	16.2	X	73.07407	281.00234	295.79329	12.01741	0.1432378	0.24259601	2.5461283	20	8 14.4	19.7
343425 2010 DL ₂₀	16.1	X	84.04526	208.32062	0.19610	13.68339	0.0567459	0.22697264	2.6616670	20	8 11.9	19.9
343426 2010 DO ₂₂	16.0	X	355.10701	15.47858	156.45291	9.86470	0.0937237	0.17987780	3.1080238	20	2 11.2	19.8
343427 2010 DD ₂₄	15.3	X	341.69517	126.12388	24.92495	10.38193	0.0317813	0.16890615	3.2411994	20	1 8.2	19.9
343428 2010 DY ₃₅	16.0	X	340.12624	306.76043	324.33769	11.13734	0.0922990	0.21787693	2.7352386	20	5 24.6	19.5
343429 2010 DW ₃₉	16.4	X	189.95253	216.63382	298.14708	6.54400	0.1356484	0.24214411	2.5492951	20	9 24.7	20.4
343430 2010 DV ₄₂	16.9	X	218.77635	230.46934	177.23752	6.07859	0.1652519	0.22260151	2.6963979	20	6 8.9	21.3
343431 2010 DM ₄₃	17.6	X	220.09159	149.04799	293.44430	2.42733	0.0559987	0.22969853	2.6405673	20	8 4.6	21.2
343432 2010 DD ₄₆	16.0	X	307.53602	328.75039	339.34261	12.60494	0.1172683	0.21233941	2.7825884	20	5 18.8	19.8
343433 2010 DT ₄₆	18.1	X	304.19203	308.27752	191.63478	2.24581	0.1750471	0.26805596	2.3822412	20	—	—
343434 2010 DU												

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343441 2010 DC ₇₈	16.6	X	215.35980	139.10847	341.86505	7.39368	0.1254378	0.23752760	2.5822205	20	9 11.6	20.3
343442 2010 DH ₇₉	16.2	X	74.33596	16.56276	166.41536	5.65397	0.0088912	0.21907497	2.7252575	20	6 12.1	19.9
343443 2010 DJ ₇₉	16.3	X	313.39864	254.88624	38.03567	3.81276	0.0735452	0.21023022	2.8011689	20	5 16.9	19.9
343444 Halluzinelle	16.8	X	221.15370	172.14812	253.61719	3.46646	0.0858104	0.22652444	2.6651767	20	7 10.9	20.5
343445 2010 EJ ₂₉	16.3	X	187.08933	309.73291	186.11119	12.40849	0.1216534	0.23265618	2.6181407	20	8 29.7	20.3
343446 2010 EC ₃₀	17.3	X	221.30046	341.97716	140.42745	7.19522	0.1767634	0.24344340	2.5402164	20	9 17.5	21.1
343447 2010 EZ ₃₁	16.9	X	215.27439	253.32297	155.27518	5.43716	0.0407613	0.21887524	2.7269151	20	6 15.7	20.8
343448 2010 EK ₃₂	16.3	X	304.37503	283.61929	338.36495	1.25689	0.0528949	0.20143148	2.8821582	20	3 27.9	20.2
343449 2010 ER ₃₃	16.9	X	230.75397	286.17933	165.79926	6.39840	0.1354114	0.23461889	2.6035189	20	8 20.5	20.5
343450 2010 EY ₃₃	16.8	X	205.86865	300.99345	183.30784	11.23624	0.0310828	0.23325413	2.6136644	20	9 14.2	20.4
343451 2010 EY ₃₄	16.0	X	267.32472	217.41699	4.05456	11.22305	0.0765201	0.18047892	3.1011187	20	—	—
343452 2010 EF ₃₅	16.5	X	87.50943	205.95282	333.22451	7.55049	0.1561718	0.21745349	2.7387883	20	7 17.6	20.5
343453 2010 EH ₃₉	16.7	X	183.32327	119.22370	10.84909	12.11856	0.0582068	0.23311639	2.6146938	20	8 28.5	20.6
343454 2010 EN ₃₉	15.8	X	352.25344	159.63262	103.40377	10.31448	0.1079471	0.20983084	2.8047221	20	6 6.5	19.1
343455 2010 EO ₃₉	15.4	X	302.95076	54.21660	147.52676	10.99463	0.0397164	0.18182169	3.0858318	20	1 15.8	19.8
343456 2010 EP ₃₉	17.0	X	266.61165	108.88733	51.90401	7.38631	0.1138230	0.26020901	2.4298968	20	—	—
343457 2010 ET ₃₉	16.1	X	196.48751	145.62928	343.78071	12.75727	0.1060768	0.23506389	2.6002321	20	9 4.2	19.9
343458 2010 EH ₄₁	16.1	X	25.41896	211.85935	11.06864	8.53293	0.0393226	0.20889012	2.8131364	20	5 29.9	19.9
343459 2010 EJ ₄₁	16.8	X	179.62719	173.79571	350.06700	8.47333	0.1270471	0.23672089	2.5880837	20	9 27.6	20.9
343460 2010 EB ₄₂	16.9	X	163.38711	106.74831	60.99707	2.15425	0.0244391	0.22888073	2.6468535	20	9 19.9	20.4
343461 2010 EG ₄₄	16.3	X	189.67567	4.43465	137.24992	14.55656	0.1769505	0.23643152	2.5901950	20	9 10.9	20.5
343462 2010 EB ₄₅	16.7	X	104.31529	102.66944	77.58197	4.82659	0.1473495	0.22552956	2.6730089	20	8 6.6	20.7
343463 2010 EH ₄₅	16.6	X	305.58982	177.78080	68.19000	3.11581	0.0427919	0.19604688	2.9346936	20	3 13.1	20.5
343464 2010 EN ₆₁	15.3	X	104.91805	138.88195	121.12717	28.29136	0.1547825	0.17955189	3.1117837	20	4 12.4	20.5
343465 2010 EC ₆₇	16.6	X	43.76999	106.79735	109.07724	4.06199	0.1311246	0.21564067	2.7541163	20	7 14.8	19.9
343466 2010 EH ₆₇	17.3	X	299.36546	113.69321	43.14022	4.48530	0.1438176	0.26941155	2.3742434	20	—	—
343467 2010 EL ₆₇	15.8	X	185.00285	192.35064	162.35297	9.75273	0.0597938	0.19369904	2.9583603	20	3 4.6	20.1
343468 2010 EX ₆₈	17.1	X	174.76848	131.35912	28.50224	5.34793	0.1936849	0.23624811	2.5915354	20	9 18.5	21.3
343469 2010 EQ ₆₉	16.3	X	201.67644	183.52104	324.09573	11.90747	0.0554066	0.24063335	2.5599540	20	10 3.1	20.1
343470 2010 EV ₆₉	16.5	X	4.70677	189.53804	101.90411	6.00397	0.0184429	0.21947831	2.7219176	20	8 4.0	20.0
343471 2010 EO ₇₀	16.0	X	312.48866	351.84210	185.91639	9.44570	0.0737880	0.17612983	3.1519605	20	—	—
343472 2010 ER ₇₀	16.6	X	324.04463	201.56071	348.65006	4.79352	0.0682606	0.18308793	3.0715876	20	1 25.9	20.7
343473 2010 EF ₇₁	16.6	X	201.59526	41.88043	7.83799	5.78292	0.0188253	0.21390204	2.7688630	20	5 30.9	20.6
343474 2010 EN ₇₃	16.1	X	52.99676	210.26191	353.12156	12.09930	0.1432341	0.21050591	2.7987226	20	7 1.1	19.8
343475 2010 EQ ₇₄	16.7	X	248.43893	346.01177	38.79467	6.63707	0.0779504	0.22149488	2.7053716	20	6 20.4	20.5
343476 2010 EF ₇₇	16.3	X	165.81489	77.38933	29.51727	6.13912	0.0424402	0.21518262	2.7580232	20	7 2.3	20.3
343477 2010 EM ₇₉	16.7	X	201.06618	310.98705	63.69378	2.74081	0.0988054	0.20522057	2.8465717	20	4 14.7	21.0
343478 2010 ES ₈₀	16.8	X	344.17913	195.22243	76.80475	1.56561	0.0274538	0.21379258	2.7699651	20	6 7.6	20.4
343479 2010 EQ ₈₃	16.6	X	223.79796	313.90108	191.01387	12.78561	0.1795530	0.24238087	2.5476347	20	10 17.8	20.4
343480 2010 ER ₈₃	16.1	X	299.15525	219.96763	21.23585	14.50932	0.0896839	0.1865091	3.0339989	20	2 27.4	20.5
343481 2010 EH ₈₄	16.5	X	217.88033	216.66827	165.32195	3.99019	0.1096027	0.20936518	2.8088793	20	5 10.9	20.9
343482 2010 EX ₈₄	16.8	X	35.28201	169.58030	2.57536	3.76638	0.0617421	0.20027042	2.8932869	20	4 9.5	20.6
343483 2010 EY ₈₄	16.6	X	333.77636	101.16334	180.60092	5.00043	0.0282710	0.21186756	2.7867183	20	6 6.5	20.3
343484 2010 EH ₈₅	16.5	X	258.64031	222.84427	172.90232	6.28979	0.0454355	0.22333981	2.6904522	20	7 22.7	20.1
343485 2010 EA ₈₆	15.7	X	296.30831	4.01967	200.38268	16.57253	0.1219090	0.17826181	3.1267789	20	—	—
343486 2010 EJ ₈₇	16.3	X	28.04058	139.30405	16.35812	10.67900	0.0310869	0.19027956	2.9936978	20	3 12.2	20.3
343487 2010 EY ₈₇	15.8	X	96.12737	177.01428	44.27660	15.73754	0.0805822	0.22634483	2.6665864	20	9 19.6	19.9
343488 2010 ET ₈₉	16.5	X	197.61547	347.72370	123.08537	3.26857	0.0507676	0.22815946	2.6524288	20	8 15.8	20.2
343489 2010 EA ₉₀	16.1	X	274.16839	256.76973	21.78536	11.92937	0.1490911	0.19116632	2.9844327	20	3 4.5	20.6
343490 2010 ET ₉₄	17.7	X	302.74073	76.28521	18.13049	6.88831	0.0940183	0.25591565	2.4569981	20	12 19.2	20.4
343491 2010 EV ₉₆	18.2	X	14.64414	47.25675	47.08606	2.83735	0.1433145	0.27685312	2.3315054	20	—	—
343492 2010 EC ₁₀₀	15.8	X	263.84829	219.34353	19.82922	10.03804	0.0645993	0.17549134	3.1596011	20	1 15.9	20.6
343493 2010 EG ₁₀₀	15.7	X	221.34417	96.82864	186.08336	5.43812	0.0788501	0.18184792	3.0855351	20	1 17.4	20.5
343494 2010 EA ₁₀₂	16.8	X	247.18199	70.45122	321.17853	4.38240	0.0091725	0.22030202	2.7151285	20	7 8.7	20.5
343495 2010 EH ₁₀₂	16.5	X	300.89601	345.81499	346.27515	5.79744	0.0304903	0.21815213	2.7329378	20	6 28.2	20.2
343496 2010 EK ₁₀₂	16.0	X	63.20012	287.42836	175.05229	4.10163	0.1230737	0.18898264	3.0073786	20	2 28.4	19.8
343497 2010 EB ₁₀₄	16.0	X	295.15268	246.62175	22.30701	11.42386	0.1196913	0.19259930	2.9696111	20	3 19.4	20.1
343498 2010 EH ₁₀₅	15.6	X	183.81518	156.32397	156.24905	10.26407	0.0766040	0.17947247	3.1127016	20	1 14.9	20.4
343499 2010 EJ ₁₀₅	16.4	X	85.13923	197.37721	353.74646	6.85485	0.1241113	0.21716053	2.7412509	20	7 26.6	20.3
343500 2010 EO ₁₀₅	16.5	X	193.11986	352.27349	149.69291	8.39371	0.0528959	0.23463169	2.6034242	20	9 22.6	20.1
343501 2010 EC ₁₀₆	16.2	X	83.64463	152.40819	39.32833	7.96534	0.0716649	0.21616493	2.7496614	20	7 17.4	20.1
343502 2010 ED ₁₀₆	16.4	X	77.11966	173.30505	42.10734	9.55692	0.1164235	0.21908597	2.7251663	20	8 19.6	20.3
343503 2010 EW ₁₀₇	15.6	X	19.99812	141.31599	24.81445	10.30037	0.1069467	0.19095517	2.9866323	20	3 16.2	19.2
343504 2010 EK ₁₀₈	16.3	X	245.82063	19.20844	22.17638	6.56657	0.0498113	0.22104217	2.7090642	20	7 15.2	20.1
343505 2010 EN ₁₀₈	15.8	X	289.31559	220.95951	20.12697	19.13392	0.0687900	0.18456864	3.0551376	20	2 21.3	20.4
343506 2010 EX ₁₀₉	16.6	X	314.89596	153.91550	164.61913	5.48231	0.0780439	0.21748838	2.7384954	20	6 23.7	20.0
343507 2010 EP ₁₁₀	15.6	X	200.12913	322.32253	10.52908	10.45097	0.0974032	0.18557788	3.0440509	20	2 27.4	20.4
343508 2010 EX ₁₁₀	15.9	X	247.53552	252.43822	24.33582	9.22572	0.0534712	0.18169008	3.0873218	20	2 13.1	20.5
343509 2010 EN ₁₁₁	15.9	X	253.04618	47.43498	187.24138	9.03609	0.0385106	0.17423485	3.1747732	20	—	—
343510 2010 EH ₁₁₂	16.1	X	2.53188	166.70282	11.15873	7.94903	0.1281609	0.18948486	3.0020623	20	3 1.2	19.7
343511 2010 EV ₁₁₂	16.0	X	167.70108	307.59669	21.94440	9.43517	0.0565743	0.17546879	3.1598718	20	1 20.8	20.8
343512 2010 EC ₁₁₃	15.9	X	153.04515	305.05862	24.20891	7.48502	0.1268747	0.17400118	3.1776148	20	1 10.0	20.9
343513 2010 EF ₁₁₃	15.5	X	173.85639	274.25629	40.67423	11.33166	0.0801948	0.17280573	3.1922529	20	1 10.9	20.5</

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343521 2010 EG ₁₃₀	16.6	X	303.39046	328.21433	25.96366	6.51417	0.0374831	0.21955482	2.7212852	20	8 2.5	20.2
343522 2010 EP ₁₃₀	16.6	X	151.77883	284.43722	190.76810	5.00328	0.0336355	0.21287272	2.7779390	20	6 24.9	20.6
343523 2010 ET ₁₃₁	16.7	X	91.34422	108.38929	14.77274	5.37453	0.0514549	0.20011880	2.8947482	20	4 21.8	20.5
343524 2010 EQ ₁₃₂	16.5	X	138.26561	71.54051	20.41561	2.03723	0.0308794	0.20436727	2.8544898	20	5 8.2	20.5
343525 2010 EZ ₁₃₂	16.3	X	100.98618	271.67984	208.82403	9.11715	0.0597381	0.20231486	2.8737624	20	5 3.4	20.2
343526 2010 EF ₁₃₃	16.9	X	130.15379	137.71941	72.12252	3.22086	0.1383600	0.23064455	2.6333419	20	10 9.1	20.9
343527 2010 EX ₁₃₃	16.3	X	37.12296	230.58811	14.95894	9.29560	0.0542286	0.21789503	2.7350871	20	7 24.4	19.9
343528 2010 EH ₁₃₄	15.3	X	209.99303	268.33617	10.00309	9.33583	0.0584493	0.17392242	3.1785741	20	1 4.3	20.2
343529 2010 EB ₁₃₆	17.8	X	324.16734	82.37394	54.19605	6.40715	0.1826456	0.26951307	2.3736472	20	—	—
343530 2010 EB ₁₃₇	15.7	X	255.77992	248.49091	7.48270	16.66987	0.0982550	0.18022391	3.1040433	20	1 26.4	20.7
343531 2010 EM ₁₃₈	16.6	X	355.49561	235.17248	42.57426	4.03331	0.1500296	0.21264895	2.7798875	20	7 3.2	19.4
343532 2010 EV ₁₃₈	15.5	X	228.53977	244.70484	23.68883	15.04591	0.1151099	0.17890603	3.1192683	20	1 9.9	20.7
343533 2010 EC ₁₃₉	15.5	X	232.73657	252.17387	29.37503	9.09581	0.1536195	0.17692305	3.1425324	20	1 27.8	20.7
343534 2010 EG ₁₃₉	15.1	X	57.95215	72.62548	183.09448	9.03276	0.1858855	0.12437659	3.9747542	20	9 9.2	20.5
343535 2010 EZ ₁₃₉	16.1	X	291.52310	10.60259	207.95993	8.79548	0.0230721	0.18022103	3.0983484	20	1 23.0	20.6
343536 2010 ER ₁₄₀	17.1	X	213.94485	9.58490	138.54903	4.66074	0.1765197	0.24345617	2.5401276	20	10 12.8	20.9
343537 2010 EV ₁₄₃	16.0	X	136.68757	40.06402	130.56566	14.32313	0.0316485	0.22600679	2.6692447	20	8 21.3	19.7
343538 2010 FG	17.4	X	153.37210	75.45988	83.98612	3.44028	0.0723961	0.23012426	2.6373096	20	8 28.6	21.3
343539 2010 FW ₂	16.6	X	263.55732	257.03111	75.29406	4.42832	0.0155550	0.21033191	2.8002659	20	5 11.0	20.3
343540 2010 FZ ₃	16.4	X	188.64949	352.89594	58.16767	5.23898	0.0667430	0.21173215	2.7879063	20	5 16.8	20.5
343541 2010 FA ₇	16.2	X	251.49862	19.26731	24.62589	6.14223	0.0203807	0.22347717	2.6893497	20	7 31.6	19.8
343542 2010 FV ₁₁	15.4	X	222.48276	288.13396	1.62291	26.12499	0.1808601	0.18130907	3.0916455	20	2 4.4	20.9
343543 2010 FR ₁₂	17.3	X	234.96596	168.07551	329.17783	1.91304	0.1136117	0.24435957	2.5338631	20	10 28.7	20.5
343544 2010 FZ ₁₂	16.2	X	299.07043	203.13295	17.69994	6.13418	0.0624647	0.18131131	3.0916201	20	2 2.8	20.5
343545 2010 FF ₁₄	15.9	X	77.76585	286.98700	169.74651	10.83039	0.0180054	0.18852113	3.0122848	20	2 27.5	20.1
343546 2010 FD ₁₆	16.0	X	225.23648	270.73819	1.24101	5.83209	0.0901955	0.17578618	3.1560671	20	1 11.2	21.0
343547 2010 FQ ₂₀	16.5	X	230.51931	23.76805	25.79385	6.96861	0.0693603	0.22157405	2.7047271	20	7 3.3	20.4
343548 2010 FM ₂₂	16.3	X	52.66976	21.35302	154.95839	7.53687	0.0567073	0.20600099	2.8393777	20	5 12.7	20.1
343549 2010 FG ₂₅	16.5	X	244.87606	344.76836	103.93846	3.82172	0.0657275	0.23678564	2.5876119	20	9 15.7	19.9
343550 2010 FR ₂₅	16.9	X	72.15473	95.33249	151.09258	3.64051	0.0166420	0.23313776	2.6145341	20	9 6.0	20.4
343551 2010 FU ₂₅	16.5	X	222.30944	187.37727	296.63336	2.01791	0.0297058	0.23481416	2.6020753	20	10 5.2	20.0
343552 2010 FC ₂₆	15.7	X	161.43539	181.69194	154.14390	10.31015	0.1334921	0.17902057	3.1179376	20	1 23.2	20.6
343553 2010 FV ₂₉	16.4	X	261.91366	157.37330	158.74880	6.86694	0.0461202	0.19891882	2.9063782	20	4 15.5	20.5
343554 2010 FD ₃₀	16.6	X	97.20326	58.70611	129.02110	3.81658	0.0950858	0.21633817	2.7481933	20	7 30.9	20.3
343555 2010 FM ₃₀	16.3	X	229.26606	260.02578	41.16496	1.89346	0.1405489	0.18180577	3.0860120	20	2 14.3	21.2
343556 2010 FQ ₃₀	16.7	X	251.13250	202.17823	186.12634	6.09278	0.0343872	0.21824688	2.7321468	20	7 4.4	20.5
343557 2010 FX ₄₇	16.6	X	103.17785	135.22846	20.21861	7.21898	0.0689910	0.21326769	2.7745081	20	6 21.6	20.5
343558 2010 FN ₅₃	16.4	X	347.57551	148.77297	137.65847	5.86085	0.0875506	0.21457954	2.7631885	20	7 1.1	19.6
343559 2010 FS ₅₃	16.5	X	299.10434	222.91655	90.88835	3.21612	0.0593061	0.20872908	2.8145831	20	5 27.3	20.2
343560 2010 FF ₅₄	15.7	X	255.50687	230.11361	21.16711	10.77726	0.0458630	0.17724481	3.1387281	20	1 23.5	20.4
343561 2010 FG ₅₅	17.0	X	103.29219	13.38926	180.69245	7.25899	0.1167888	0.21914067	2.7247128	20	8 15.9	21.1
343562 2010 FW ₅₅	16.3	X	135.94074	122.03910	31.02288	6.50105	0.0547819	0.22081581	2.7109153	20	7 29.9	20.3
343563 2010 FL ₅₆	15.9	X	191.22633	269.96637	184.00877	6.99974	0.0969598	0.21850844	2.7299660	20	7 12.2	20.1
343564 2010 FO ₅₆	16.2	X	208.28722	133.18133	15.13964	12.43648	0.1607670	0.23969979	2.5665966	20	10 6.6	20.1
343565 2010 FE ₅₇	16.6	X	180.72749	53.60960	38.81444	5.57640	0.0534493	0.21712878	2.7415181	20	7 1.0	20.6
343566 2010 FK ₅₇	16.7	X	221.98475	0.80672	109.18133	5.31362	0.1393958	0.23679934	2.5875121	20	9 5.8	20.5
343567 2010 FB ₈₃	15.7	X	196.49697	332.34786	26.51313	12.36701	0.0053249	0.19709184	2.9243114	20	3 25.4	19.8
343568 2010 FD ₈₃	16.9	X	205.48315	42.55310	93.14774	3.58301	0.0785122	0.23779963	2.5002509	20	9 27.2	20.6
343569 2010 FO ₈₃	16.2	X	82.28158	52.61271	34.47885	6.90239	0.1164682	0.18895313	3.0876917	20	3 9.5	20.2
343570 2010 FR ₈₄	16.1	X	66.90815	173.98429	47.05428	13.47878	0.0499621	0.21264458	2.7799256	20	8 2.9	20.1
343571 2010 FX ₈₄	16.6	X	70.99043	316.86447	222.22695	3.59388	0.0666811	0.21136852	2.7911029	20	6 1.7	20.2
343572 2010 FF ₈₅	15.6	X	350.90309	117.91777	57.08151	9.80637	0.0743243	0.18548914	3.0450217	20	2 14.7	19.7
343573 2010 FJ ₈₅	15.4	X	26.10486	355.51028	141.22080	13.26587	0.0374314	0.19040389	2.9923945	20	2 12.1	19.2
343574 2010 FC ₈₆	16.4	X	318.19733	146.68534	186.62547	5.84178	0.0529315	0.21894682	2.7263208	20	7 20.9	19.8
343575 2010 FW ₈₆	16.1	X	324.85530	354.64417	168.28149	9.83979	0.0360689	0.17510865	3.1642029	20	—	—
343576 2010 FD ₈₇	15.9	X	239.58345	191.57792	58.29980	25.74418	0.2053608	0.26941678	2.3742127	20	—	—
343577 2010 FF ₈₈	16.4	X	258.21835	189.42179	52.09524	2.28635	0.1093482	0.17711717	3.1402359	20	1 6.1	21.1
343578 2010 FH ₈₈	15.6	X	146.52778	355.26867	0.97630	11.12639	0.0684160	0.18056266	3.1001599	20	1 30.8	20.3
343579 2010 FO ₈₈	17.0	X	118.89801	56.82052	98.95620	2.95856	0.1013404	0.21501678	2.7594412	20	7 15.2	21.0
343580 2010 FG ₈₉	16.9	X	133.21256	287.94771	198.65733	3.92583	0.0136902	0.21456324	2.7633284	20	6 15.2	20.7
343581 2010 FR ₉₀	16.9	X	26.81961	20.85152	215.45438	2.75234	0.0355141	0.21130523	2.7916602	20	6 20.9	20.4
343582 2010 FX ₉₄	16.3	X	249.18512	291.00423	34.33957	12.54064	0.0082516	0.19707967	2.9244318	20	4 15.6	20.3
343583 2010 FY ₉₄	17.1	X	183.84156	345.26970	148.49126	3.58511	0.0570495	0.22651296	2.6652667	20	8 28.7	21.0
343584 2010 FA ₉₅	16.5	X	167.15011	314.51269	115.23495	3.13910	0.0433401	0.20393452	2.8585265	20	5 16.7	20.6
343585 2010 FG ₁₀₁	16.2	X	191.31447	247.76211	63.49711	5.71542	0.1556953	0.17294872	3.1904931	20	1 25.3	21.4
343586 2010 GM ₉	13.2	X	282.98180	308.43665	1.83489	15.49936	0.0702386	0.08537827	5.1078462	20	4 28.0	20.1
343587 Mamuna	15.3	X	202.35401	31.17913	46.12245	26.86122	0.1286862	0.21873858	2.7280508	20	6 29.7	20.0
343588 2010 GE ₂₇	15.6	X	91.40755	297.12352	164.21402	10.86405	0.0830696	0.19068008	2.9895042	20	4 2.3	19.7
343589 2010 GL ₂₈	15.8	X	341.86546	227.69751	337.67847	9.59450	0.1794341	0.19076512	2.9886156	20	2 23.6	19.1
343590 2010 GG ₃₃	16.1	X	139.16386	179.85385	11.20607	14.14482	0.1674383	0.23305491	2.6151536	20	9 25.6	20.4
343591 2010 GU ₆₂	15.8	X	119.37994	320.57874	219.92807	14.94475	0.1424492	0.22079850	2.7110569	20	8 14.8	20.3
343592 2010 GN ₆₆	15.9	X	153.66958	140.09389	39.58265	13.60265	0.1123090	0.22817794	2.6522855	20	9 27.9	20.1
343593 2010 GJ ₉₅	17.6	X	65.40964	190.57848	239.13205	2.55596	0.1059107	0.29164547	2.2519871	20	—	—
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ELEMENTS AND OPPOSITION DATES IN 2020

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343601 2010 GN ₁₀₉	16.2	X	69.54501	273.32053	183.49776	11.10942	0.0597559	0.18595815	3.0398995	20	2 21.2	20.3
343602 2010 GU ₁₁₀	16.4	X	144.05955	28.57923	18.35435	12.30190	0.0665085	0.19132276	2.9828057	20	3 25.9	20.7
343603 2010 GW ₁₁₁	16.4	X	311.85443	12.23893	214.21607	8.81717	0.0300544	0.18504507	3.0498913	20	2 24.0	20.7
343604 2010 GY ₁₁₂	16.2	X	11.13270	332.60352	161.73770	7.95189	0.1047821	0.18093738	3.0958781	20	1 18.3	20.1
343605 2010 GE ₁₁₃	15.8	X	230.49842	220.77149	86.26388	6.67475	0.1122651	0.18335614	3.0685915	20	2 25.5	20.6
343606 2010 GF ₁₁₄	16.4	X	257.82612	79.29277	215.01257	12.80647	0.0227019	0.18797803	3.0180840	20	3 12.4	20.8
343607 2010 GH ₁₁₄	15.8	X	204.72355	84.89971	223.97090	10.80551	0.0578150	0.17670997	3.1450582	20	1 29.3	20.8
343608 2010 GI ₁₁₄	16.7	X	318.93231	267.41923	26.25534	10.02017	0.0464006	0.20350919	2.8625079	20	5 27.8	20.6
343609 2010 GB ₁₁₅	16.6	X	201.89281	263.88828	219.64040	8.07862	0.1530405	0.22911585	2.6450423	20	8 25.5	20.9
343610 2010 GC ₁₁₆	16.4	X	226.97234	353.55776	94.18661	8.38268	0.0907379	0.22241273	2.6979234	20	8 18.1	20.3
343611 2010 GS ₁₂₁	15.9	X	298.11462	162.53885	57.07536	2.32500	0.1456937	0.17930525	3.1146366	20	1 18.5	20.4
343612 2010 GT ₁₂₂	15.9	X	218.50849	156.76791	159.35072	10.31390	0.0721281	0.18467825	3.0539287	20	2 23.0	20.4
343613 2010 GX ₁₂₂	16.5	X	184.72499	277.51787	267.24399	4.38408	0.0474646	0.23912602	2.5707006	20	11 5.2	20.2
343614 2010 GD ₁₂₅	16.0	X	196.95011	6.08713	68.65855	6.17737	0.0426768	0.21555845	2.7548165	20	6 27.2	20.0
343615 2010 GE ₁₂₅	16.4	X	193.88014	136.81954	181.40181	18.17087	0.0839952	0.17969076	3.1101802	20	1 29.7	21.5
343616 2010 GC ₁₂₇	16.0	X	75.16594	236.37061	173.05139	10.53336	0.0568337	0.16898539	3.2401960	20	1 5.5	20.6
343617 2010 GH ₁₂₈	16.0	X	252.05110	48.68613	173.32566	10.84005	0.0839553	0.17137484	3.2098774	20	—	—
343618 2010 GD ₁₃₈	17.2	X	228.75258	226.46358	228.04166	4.09200	0.2146035	0.23449783	2.6044149	20	8 11.7	21.2
343619 2010 GM ₁₃₈	16.4	X	43.13219	258.22172	222.55445	5.28222	0.0454774	0.18633315	3.0358196	20	2 13.9	20.5
343620 2010 GY ₁₃₈	15.4	X	8.38429	54.38479	96.35745	12.15805	0.0475728	0.17703562	3.1412001	20	2 10.0	19.7
343621 2010 GV ₁₃₉	16.4	X	154.74727	74.43232	56.75442	5.52958	0.0630797	0.21653774	2.7465045	20	7 22.5	20.4
343622 2010 GF ₁₄₀	15.9	X	239.94885	221.52997	49.09420	11.17116	0.0788837	0.17635152	3.1493185	20	1 26.6	20.8
343623 2010 GL ₁₅₆	16.3	X	341.31967	226.67254	55.99461	7.18067	0.0130901	0.21031825	2.8003871	20	6 18.2	20.1
343624 2010 GN ₁₅₆	16.3	X	19.42334	0.61955	6.30173	7.36346	0.1628640	0.24347758	2.5399786	20	12 28.3	19.5
343625 2010 GA ₁₅₇	15.4	X	304.27157	111.37315	102.28707	13.24025	0.1126223	0.17965778	3.1105608	20	1 23.3	19.7
343626 2010 GP ₁₅₈	15.9	X	120.30861	306.23380	169.49043	16.13861	0.2054474	0.20374548	2.8602943	20	6 6.9	20.8
343627 2010 HY ₃₁	12.9	X	298.36322	54.64691	249.78000	14.24397	0.1257074	0.08396657	5.1649381	20	5 6.3	19.6
343628 2010 HC ₄₁	13.1	X	286.54792	34.07100	277.76273	12.53290	0.1152025	0.08199104	5.2475725	20	4 30.1	20.2
343629 2010 HA ₇₈	16.1	X	152.72545	38.17413	43.39102	10.81436	0.0976860	0.20245667	2.8724203	20	5 16.3	20.5
343630 2010 HP ₉₉	16.3	X	195.01328	309.92492	276.48761	9.88889	0.1507155	0.23611614	2.5925010	20	12 28.6	20.0
343631 2010 HB ₁₀₅	16.3	X	152.49904	83.16058	47.96876	9.68617	0.0800980	0.21483710	2.7609796	20	7 21.2	20.5
343632 2010 HR ₁₀₇	16.1	X	157.50933	78.56744	66.03288	13.70648	0.0385394	0.21975968	2.7195938	20	8 16.5	20.2
343633 2010 HW ₁₀₇	15.8	X	192.84172	116.66765	264.63976	17.30214	0.0638821	0.18232189	3.0801852	20	2 20.6	20.9
343634 2010 HV ₁₁₀	12.9	X	304.81000	248.45595	51.84417	19.38145	0.1021949	0.08501368	5.1224397	20	5 13.6	19.4
343635 2010 JC ₄	16.8	X	243.86926	313.06033	173.97505	13.47690	0.1538145	0.25460724	2.4654085	20	10 26.5	20.1
343636 2010 JA ₂₉	16.3	X	56.61321	356.48722	181.88882	13.10116	0.1962426	0.20120021	2.8843665	20	6 9.8	20.2
343637 2010 JE ₂₉	15.5	X	241.74173	138.69058	147.16469	11.13283	0.0435649	0.17671147	3.1450403	20	2 15.0	20.0
343638 2010 JB ₃₁	16.5	X	137.87173	308.03607	186.04637	13.30449	0.2060795	0.21672555	2.7449176	20	7 12.3	21.3
343639 2010 JM ₃₆	16.7	X	166.54816	255.92794	209.53795	5.23306	0.0233760	0.20909409	2.8113066	20	6 29.8	20.8
343640 2010 JM ₃₈	15.9	X	156.54339	315.73350	242.23088	14.85144	0.2197650	0.23371636	2.6102172	20	10 13.7	20.6
343641 2010 JV ₃₈	16.5	X	188.71369	313.82128	36.63745	14.15386	0.0714929	0.18551420	3.0447475	20	3 11.0	21.3
343642 2010 JC ₄₂	13.0	X	353.61017	290.40754	317.86897	21.49483	0.0653188	0.08241936	5.2293763	20	5 15.5	19.9
343643 2010 JF ₄₉	16.1	X	273.57215	18.12335	18.48449	14.09813	0.2440995	0.23050015	2.6344416	20	7 18.6	19.9
343644 2010 JX ₆₉	13.2	X	1.05248	308.71399	297.05861	13.02803	0.1037006	0.08396576	5.1649712	20	5 26.6	19.7
343645 2010 JL ₇₂	16.2	X	90.09952	319.81160	180.01603	12.21218	0.1043209	0.20023319	2.8936456	20	5 22.7	20.4
343646 2010 JN ₇₂	15.9	X	145.98953	304.15847	104.82210	9.97019	0.0210711	0.18819730	3.0157393	20	3 29.5	20.3
343647 2010 JP ₇₄	15.6	X	41.39474	241.44438	222.40064	9.35795	0.0387193	0.17334049	3.1856841	20	1 22.9	20.0
343648 2010 JE ₈₀	15.2	X	134.78587	266.45537	125.13540	16.63307	0.0408390	0.17809755	3.1287012	20	2 34.8	19.8
343649 2010 JD ₈₄	15.8	X	204.72259	251.16192	53.99652	11.46529	0.0699148	0.17614921	3.1517293	20	1 31.8	20.8
343650 2010 JY ₈₅	17.4	X	212.43124	279.48802	276.13325	4.15322	0.0580578	0.25978818	2.4325202	20	12 27.8	20.3
343651 2010 JH ₁₁₅	15.6	X	280.14412	240.27068	24.61522	17.91590	0.1580169	0.18346083	3.0674240	20	2 27.3	20.4
343652 2010 JG ₁₂₂	15.9	X	250.67396	176.62877	87.69828	4.62675	0.0781514	0.17388600	3.1790179	20	1 28.6	20.7
343653 2010 JB ₁₂₃	15.5	X	115.66424	264.40649	126.13317	10.63396	0.0313032	0.17000432	3.2272263	20	1 29.8	20.1
343654 2010 KA ₁	15.8	X	7.86051	194.10881	160.10293	15.65036	0.0819822	0.22473946	2.6792701	20	7 20.2	19.1
343655 2010 KN ₃₆	15.5	X	298.80857	174.48298	61.84436	12.39405	0.1139072	0.18154169	3.0890039	20	2 17.1	20.0
343656 2010 LR ₄₆	16.9	X	235.59600	298.15991	19.27739	10.43121	0.0311495	0.19697809	2.9254371	20	3 18.9	21.1
343657 2010 LU ₆₀	16.0	X	285.90795	64.37220	153.25073	6.12714	0.1154890	0.17086111	3.2164284	20	1 6.8	20.7
343658 2010 LA ₆₁	15.6	X	34.84540	238.50520	246.58229	6.70378	0.0545436	0.17453805	3.1710953	20	2 9.6	20.0
343659 2010 LO ₆₅	15.7	X	92.27128	330.04126	113.96265	11.07214	0.1321378	0.18083919	3.0969986	20	3 23.5	20.2
343660 2010 LW ₁₁₃	16.1	X	210.73151	28.47141	137.57940	6.06204	0.2313665	0.23931613	2.5693390	20	10 26.3	20.2
343661 2010 MU ₁₆	15.9	X	204.08682	67.75734	185.21853	10.89102	0.0468224	0.16788990	3.2542656	20	—	—
343662 2010 MO ₅₆	16.1	X	125.01931	288.28542	215.26262	8.65101	0.0996215	0.21712696	2.7415335	20	7 4.6	20.3
343663 2010 NL ₅	13.5	X	244.11878	136.85100	229.19775	15.14519	0.0644318	0.08161644	5.2636169	20	5 24.5	20.6
343664 2010 NM ₁₆	16.1	X	124.95012	165.44205	186.68843	8.92990	0.0684147	0.16997024	3.2276576	20	—	—
343665 2010 NM ₇₄	15.7	X	62.12743	204.60110	236.73523	26.25855	0.1318699	0.17973792	3.1096362	20	1 24.0	20.2
343666 2010 OD ₃₇	15.6	X	161.11539	74.58990	302.99380	15.19739	0.0822322	0.18424174	3.0587504	20	3 2.2	20.4
343667 2010 OY ₄₉	15.5	X	186.87766	262.88250	39.05078	17.03158	0.0844053	0.16855920	3.2456454	20	1 9.9	20.8
343668 2010 OY ₅₂	16.2	X	165.14324	248.37192	130.42398	9.93599	0.1555257	0.18409021	3.0604286	20	3 21.2	21.2
343669 2010 OP ₅₃	16.5	X	102.06745	116.25679	12.74452	17.71405	0.0742770	0.20083016	2.8879084	20	5 11.2	20.8
343670 2010 OU ₅₇	15.9	X	244.85253	26.89646	253.73257	12.35432	0.1133004	0.17845633	3.1245063	20	2 2.1	20.9
343671 2010 OV ₆₀	15.8	X	279.33116	192.58546	47.46220	17.24627	0.0059856	0.17910048	3.1170102	20	2 15.9	20.5
343672 2010 OP ₆₉	15.7	X	151.82292	183.66026	207.56852	9.71747	0.0743424	0.18487048	3.0518112	20	3 12.2	20.3
343673 2010 OD ₇₄	15.8	X	307.39142	25.63774	163							

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ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343681 2010 <i>VN</i> ₁₉₉	13.1	X	283.78685	311.19421	113.34495	5.42939	0.0963236	0.08362368	5.1790471	20	9 10.5	19.8
343682 2010 <i>XW</i> ₆₇	16.7	X	14.46388	253.56798	324.83982	12.15453	0.1800534	0.22728456	2.6592312	20	5 9.1	19.6
343683 2011 <i>AW</i> ₁₉	16.7	X	87.59107	359.87219	91.03023	7.39510	0.1333442	0.23101239	2.6305458	20	3 20.8	20.1
343684 2011 <i>BM</i> ₃₅	17.6	X	114.00610	119.63631	132.51474	2.97163	0.1800386	0.27382895	2.3486401	20	11 22.1	21.3
343685 2011 <i>BA</i> ₄₇	17.6	X	206.75562	137.05529	4.80027	20.09811	0.0629481	0.37623640	1.9003292	20	10 24.4	19.7
343686 2011 <i>BP</i> ₈₈	17.2	X	346.35076	296.96048	312.12780	11.03942	0.2982140	0.22622137	2.6675566	20	4 6.2	19.6
343687 2011 <i>BY</i> ₁₄₃	17.8	X	188.55799	333.60788	288.07898	2.98300	0.2382730	0.29330547	2.2434821	20	—	—
343688 2011 <i>CT</i> ₁₈	16.4	X	352.68187	277.28712	319.25788	12.62167	0.12210621	0.22943726	2.6425715	20	4 11.4	19.0
343689 2011 <i>CX</i> ₂₂	13.3	X	262.69932	337.22136	112.76634	14.83527	0.1192014	0.08440876	5.1468837	20	9 15.2	20.3
343690 2011 <i>CQ</i> ₂₆	16.1	X	333.00249	309.55801	102.71179	6.95693	0.1414613	0.18335103	3.0686485	20	11 22.6	19.6
343691 2011 <i>CU</i> ₄₃	17.5	X	66.07300	54.41569	216.68774	2.02780	0.1904365	0.26542466	2.3979597	20	10 30.0	20.7
343692 2011 <i>CJ</i> ₁₀₉	18.2	X	194.33311	99.29815	157.78323	7.99675	0.1508454	0.29482983	2.2357424	20	—	—
343693 2011 <i>CF</i> ₁₁₅	17.4	X	7.31463	66.04811	196.26263	5.25726	0.2604059	0.23950819	2.5679652	20	7 15.1	19.2
343694 2011 <i>DH</i> ₁	16.5	X	326.53318	343.33328	332.84834	9.71268	0.2293309	0.24468213	2.5316357	20	6 24.8	18.8
343695 2011 <i>DB</i> ₈	17.3	X	145.44843	253.11609	6.07707	5.73596	0.1877522	0.27519910	2.3408381	20	12 27.4	21.1
343696 2011 <i>DG</i> ₂₀	17.7	X	221.72181	64.91783	166.12649	6.23465	0.1351239	0.29026008	2.2591471	20	—	—
343697 2011 <i>DO</i> ₂₁	16.7	X	207.54849	212.43889	325.09029	5.51794	0.2800878	0.27556036	2.3387918	20	11 2.1	20.5
343698 2011 <i>DP</i> ₂₃	17.8	X	68.77693	164.34667	133.66749	2.06117	0.1789102	0.26387841	2.4073181	20	12 4.7	21.4
343699 2011 <i>DT</i> ₂₄	17.0	X	193.27727	121.67715	107.92644	5.37240	0.1244564	0.28488878	2.2874546	20	—	—
343700 2011 <i>DB</i> ₃₀	17.4	X	195.29568	227.36678	15.64706	3.83433	0.2011172	0.28678677	2.2773510	20	—	—
343701 2011 <i>DB</i> ₄₂	17.6	X	76.59185	110.63726	144.41479	2.90602	0.1650484	0.25588165	2.4572157	20	10 17.5	21.2
343702 2011 <i>DN</i> ₅₀	16.9	X	183.39968	26.59439	205.09731	10.58520	0.1933243	0.28170992	2.3046304	20	12 27.8	20.5
343703 2011 <i>EY</i> ₃	17.1	X	358.16924	121.40558	170.87303	16.61335	0.1757422	0.24166608	2.5526557	20	8 1.9	19.7
343704 2011 <i>ES</i> ₁₂	16.4	X	327.65371	59.95766	155.85995	15.85777	0.2056860	0.21238802	2.7821639	20	2 4.9	19.9
343705 2011 <i>EZ</i> ₁₆	17.7	X	284.21971	11.06306	342.58757	18.60075	0.0678402	0.35405673	1.9788862	20	7 11.8	20.0
343706 2011 <i>EN</i> ₁₇	15.6	X	161.59813	223.41767	56.93609	28.60864	0.2271290	0.17499664	3.1655529	20	—	—
343707 2011 <i>ET</i> ₁₇	15.4	X	289.36070	131.20869	218.02494	8.18707	0.2862159	0.24329483	2.5412504	20	5 25.7	18.6
343708 2011 <i>EV</i> ₂₀	17.2	X	229.17987	257.17802	333.69624	5.16137	0.1326258	0.29670727	2.2263012	20	—	—
343709 2011 <i>EG</i> ₂₅	17.4	X	178.23201	92.46388	155.89228	5.27085	0.1039858	0.28344642	2.2952081	20	—	—
343710 2011 <i>EM</i> ₂₅	17.0	X	66.73471	173.82338	128.88303	6.08594	0.12529784	0.26331744	2.4107359	20	12 6.3	20.6
343711 2011 <i>EN</i> ₂₅	16.5	X	60.54892	228.33591	51.09588	7.46794	0.1721052	0.25346517	2.4728087	20	10 31.3	19.8
343712 2011 <i>ES</i> ₂₆	18.0	X	178.04971	143.64865	144.69665	4.67407	0.1508530	0.29610224	2.2293329	20	—	—
343713 2011 <i>ED</i> ₃₆	16.1	X	18.72660	326.30514	1.98019	23.67772	0.2141523	0.26009183	2.4306265	20	11 6.2	19.4
343714 2011 <i>EL</i> ₃₇	17.3	X	91.97042	189.53099	128.50308	6.77346	0.1851634	0.27718822	2.3296260	20	—	—
343715 2011 <i>ER</i> ₃₉	17.1	X	340.50826	274.22392	29.73428	14.51306	0.2197812	0.23439301	2.6051913	20	7 13.1	19.6
343716 2011 <i>EW</i> ₅₄	16.2	X	327.38898	192.81951	68.92666	6.40323	0.0959072	0.22385200	2.6863467	20	4 24.7	19.4
343717 2011 <i>EZ</i> ₆₄	18.0	X	155.18720	166.45780	125.14855	6.02443	0.2473987	0.28846210	2.2685249	20	—	—
343718 2011 <i>EP</i> ₆₆	17.6	X	94.66004	82.57654	161.73642	2.73633	0.1351504	0.25849229	2.4406434	20	10 20.0	21.0
343719 2011 <i>ES</i> ₆₇	16.8	X	57.72217	113.57853	180.26675	6.72675	0.1900734	0.26072523	2.4266884	20	11 19.7	20.3
343720 2011 <i>EM</i> ₆₈	17.2	X	74.84872	108.18469	173.63880	9.27296	0.1805015	0.26068718	2.4269245	20	11 21.7	20.9
343721 2011 <i>EW</i> ₆₈	17.6	X	176.94347	121.73591	126.16298	5.58236	0.1998890	0.28060126	2.3106968	20	—	—
343722 2011 <i>ED</i> ₆₉	17.2	X	83.71788	209.41923	71.45856	6.30390	0.1885375	0.26151114	2.4218240	20	11 28.1	20.8
343723 2011 <i>EY</i> ₇₀	17.5	X	191.25902	261.18583	333.54798	2.57550	0.1917881	0.28345783	2.2951465	20	—	—
343724 2011 <i>EK</i> ₇₁	17.6	X	167.50363	146.33828	112.24240	3.65138	0.1318906	0.28024873	2.3126342	20	—	—
343725 2011 <i>EN</i> ₇₂	16.7	X	20.12682	339.90733	344.37939	5.92828	0.1256560	0.25844437	2.4409491	20	10 27.9	19.7
343726 2011 <i>EL</i> ₇₄	17.8	X	217.44602	17.77317	235.77157	4.06682	0.1148528	0.29438803	2.2379787	20	—	—
343727 2011 <i>EY</i> ₇₇	17.6	X	250.08528	96.83709	33.40422	22.37030	0.0348343	0.38061763	1.8857181	20	12 31.4	19.9
343728 2011 <i>EK</i> ₇₈	18.5	X	186.59161	294.30221	172.72438	22.50842	0.0754767	0.35992425	1.9573206	20	8 2.9	21.2
343729 2011 <i>EY</i> ₈₁	17.6	X	216.37930	125.30695	317.95702	17.18312	0.0934513	0.36394028	1.9428948	20	8 8.8	19.7
343730 2011 <i>FY</i>	17.4	X	203.42562	26.13362	196.74743	6.24484	0.0623863	0.28501709	2.2867680	20	—	—
343731 2011 <i>FR</i> ₁	17.6	X	145.21578	291.02053	6.43890	8.00063	0.1539336	0.28992701	2.2608770	20	—	—
343732 2011 <i>FL</i> ₂	17.0	X	188.36424	84.76699	202.33385	4.33070	0.1814285	0.29343117	2.2428414	20	—	—
343733 2011 <i>FV</i> ₅	16.7	X	121.71853	203.81513	34.78949	13.99608	0.2717051	0.25784982	2.4446958	20	11 9.7	21.0
343734 2011 <i>FV</i> ₇	17.2	X	242.89451	194.10595	45.09004	8.94378	0.1479055	0.29394117	2.2402463	20	—	—
343735 2011 <i>FS</i> ₈	17.0	X	98.67394	245.51683	13.86968	5.08279	0.1000196	0.26029685	2.4293501	20	11 7.9	20.4
343736 2011 <i>FZ</i> ₈	17.2	X	51.88993	67.59549	200.12776	15.55645	0.1139428	0.24466692	2.5317406	20	9 21.8	20.5
343737 2011 <i>FO</i> ₉	17.9	X	200.91416	202.04888	50.03594	6.75773	0.0918650	0.29293661	2.2453650	20	—	—
343738 2011 <i>FD</i> ₁₂	16.5	X	100.31655	349.25369	203.72112	15.22452	0.1120444	0.24016340	2.5632925	20	8 9.8	20.5
343739 2011 <i>FW</i> ₁₂	16.9	X	354.05667	248.32686	70.49398	9.67179	0.2366976	0.24134892	2.5548916	20	9 20.5	19.1
343740 2011 <i>FE</i> ₁₃	17.0	X	120.03344	95.23365	159.24896	6.80157	0.0973131	0.26123604	2.4235240	20	11 27.1	20.6
343741 2011 <i>FW</i> ₁₄	17.9	X	197.53379	297.88309	11.51769	3.16415	0.0547025	0.30900638	2.1668279	20	1 6.1	20.6
343742 2011 <i>FC</i> ₁₅	16.3	X	14.48777	330.50866	6.24556	16.67740	0.2195216	0.25997884	2.4313308	20	11 17.5	19.3
343743 Kjurkchieva	16.6	X	1.80872	2.85473	219.79736	7.08357	0.1489577	0.22209189	2.6932500	20	4 23.5	19.2
343744 2011 <i>FL</i> ₂₁	17.6	X	84.10449	186.43220	118.06311	2.32086	0.1844141	0.26813819	2.3817542	20	12 28.0	21.1
343745 2011 <i>FB</i> ₃₀	16.8	X	320.39351	225.64789	46.36405	6.36348	0.2206781	0.22132898	2.7067233	20	4 8.8	19.9
343746 2011 <i>FK</i> ₃₁	17.0	X	93.18937	214.84376	37.29715	6.89579	0.0951068	0.25539963	2.4603065	20		

ELEMENTS AND OPPOSITION DATES IN 2020

ECLIPTIC AND EQUINOX 2000.0, EPOCH 2020 MAY 31.0 TT

Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343761 2011 FT ₈₈	16.4	X	351.79034	294.02529	335.91770	10.72946	0.1652797	0.23115629	2.6294540	20	6 13.5	19.1
343762 2011 FC ₁₀₃	17.2	X	86.32184	215.23407	44.12474	3.88889	0.1990584	0.25926711	2.4357784	20	11 4.4	21.0
343763 2011 FQ ₁₂₀	18.0	X	122.36302	283.87804	342.02677	2.55810	0.1725171	0.26942650	2.3741556	20	12 14.4	21.9
343764 2011 FO ₁₂₆	17.7	X	266.99774	276.59037	280.19001	2.86648	0.1079723	0.29847748	2.2174900	20	—	—
343765 2011 FN ₁₃₀	17.1	X	113.31863	287.85415	341.08111	6.22833	0.1134900	0.27316667	2.3524347	20	12 8.8	20.6
343766 2011 FZ ₁₄₀	17.5	X	146.81619	103.34473	191.17928	5.79330	0.1321171	0.28671397	2.2777365	20	—	—
343767 2011 FK ₁₄₁	17.7	X	250.01385	34.16939	205.57041	4.82021	0.1287505	0.29757896	2.2219515	20	—	—
343768 2011 FD ₁₄₂	16.6	X	359.48718	115.76314	175.96853	11.14514	0.1986891	0.23420696	2.6065708	20	8 4.9	19.1
343769 2011 FM ₁₄₅	16.9	X	179.37765	289.60926	280.40308	5.51139	0.2058443	0.27299466	2.3534228	20	11 24.7	20.7
343770 2011 FJ ₁₄₈	17.0	X	185.97078	242.94004	44.90039	7.27177	0.1391030	0.29126337	2.2539562	20	—	—
343771 2011 FY ₁₄₈	17.8	X	189.53415	239.79389	346.79650	4.97013	0.1276986	0.27959105	2.3162595	20	—	—
343772 2011 FV ₁₄₉	17.1	X	246.89819	326.49125	213.61839	4.90034	0.0365027	0.28553597	2.2839969	20	—	—
343773 2011 FC ₁₅₀	16.9	X	201.23120	152.76886	99.53790	6.87350	0.0769758	0.28816939	2.2700608	20	—	—
343774 2011 FN ₁₅₀	16.9	X	128.07298	135.06935	112.76830	3.60192	0.1516805	0.26837607	2.3803466	20	11 27.9	20.5
343775 2011 FA ₁₅₁	16.1	X	19.85922	279.90138	325.96553	10.84809	0.1438916	0.23013280	2.6372443	20	7 6.6	19.0
343776 2011 FV ₁₅₄	17.2	X	291.72293	314.39634	57.67341	22.58151	0.0812339	0.35945715	1.9590159	20	9 6.6	19.6
343777 2011 GL	16.8	X	56.59383	229.43558	92.77976	3.26857	0.2319736	0.26200340	2.4187896	20	12 27.3	20.2
343778 2011 GK ₁	17.0	X	136.11306	78.16385	223.12007	5.50488	0.1095320	0.28467024	2.2886252	20	—	—
343779 2011 GF ₂	16.9	X	10.28940	71.29840	182.25181	29.57164	0.3034444	0.23153010	2.6266230	20	7 11.8	19.7
343780 2011 GQ ₃	17.9	X	216.98099	190.13256	58.06393	4.72659	0.1316861	0.29157007	2.2523753	20	—	—
343781 2011 GJ ₁₃	17.4	X	222.64822	334.42589	253.71448	2.91873	0.1280483	0.28899388	2.2657411	20	—	—
343782 2011 GN ₂₈	17.3	X	157.11007	228.64083	79.77762	6.91351	0.1859961	0.28731448	2.2745616	20	—	—
343783 2011 GP ₃₀	17.6	X	255.28812	340.25621	171.26371	2.21299	0.1293117	0.27947633	2.3168933	20	12 24.3	20.0
343784 2011 GZ ₃₁	17.5	X	227.24063	349.14209	215.19678	5.48709	0.0488822	0.28170667	2.3046482	20	—	—
343785 2011 GB ₃₆	17.3	X	183.02007	341.77523	263.98436	5.63280	0.0662242	0.28284754	2.2984468	20	—	—
343786 2011 GL ₃₇	17.0	X	24.51645	275.77147	20.79829	3.58564	0.1778351	0.25387852	2.4701240	20	10 5.9	19.7
343787 2011 GU ₄₁	17.0	X	304.33038	233.01937	171.30989	22.38152	0.1027082	0.36987453	1.9220577	20	11 19.5	19.0
343788 2011 GT ₄₈	17.1	X	5.57950	86.82757	201.64848	12.56654	0.1702407	0.23743498	2.5828920	20	8 9.4	19.9
343789 2011 GU ₄₉	17.1	X	344.00676	101.83100	200.25614	9.34327	0.2230294	0.23286774	2.6165548	20	7 13.4	19.4
343790 2011 GH ₅₃	17.3	X	7.04048	237.94521	8.41801	3.45076	0.1652411	0.22562595	2.6722475	20	6 9.8	20.0
343791 2011 GR ₅₆	16.7	X	32.78658	250.63941	23.71035	5.62377	0.2405093	0.23676547	2.5877589	20	9 26.1	19.7
343792 2011 GH ₅₇	16.6	X	296.51910	255.26787	66.80929	7.96161	0.1324686	0.22804402	2.6533238	20	5 23.3	19.7
343793 2011 GR ₅₈	17.2	X	353.30315	119.52813	140.43987	4.63939	0.2208087	0.22569565	2.6716974	20	6 1.0	19.5
343794 2011 GO ₆₁	13.1	X	262.95708	359.90417	94.41706	9.16349	0.0184524	0.08224504	5.2367626	20	10 2.4	20.1
343795 2011 GO ₆₃	17.1	X	152.07797	238.73214	70.25677	5.40566	0.1749679	0.28654649	2.2786239	20	—	—
343796 2011 GA ₆₄	17.9	X	202.08846	257.34093	6.10820	1.96912	0.1558799	0.29344080	2.2427923	20	—	—
343797 2011 GA ₆₅	17.4	X	226.16417	115.55214	121.25474	4.69972	0.1697687	0.29097826	2.2554283	20	—	—
343798 2011 GB ₆₅	16.8	X	67.22488	136.48849	144.75203	6.63124	0.1067471	0.25491598	2.4634174	20	11 3.9	20.2
343799 2011 GE ₆₅	16.9	X	90.16463	162.47241	127.27812	7.34129	0.1352567	0.26367253	2.4085710	20	12 12.4	20.5
343800 2011 GD ₆₆	15.5	X	190.05282	321.82391	312.38610	15.54208	0.2538581	0.17870800	3.1215722	20	—	—
343801 2011 GO ₆₆	17.5	X	190.42759	234.24538	19.70759	2.16822	0.2000784	0.28306284	2.9272811	20	—	—
343802 2011 GT ₇₀	17.1	X	100.79557	223.12388	108.50194	14.30322	0.2336584	0.27843697	2.3226554	20	—	—
343803 2011 GP ₇₁	17.5	X	74.13538	354.27138	315.68001	1.78962	0.2046902	0.26756374	2.3851620	20	12 27.1	21.0
343804 2011 GA ₇₈	16.5	X	36.22330	318.86939	236.55998	11.06420	0.1359405	0.22286813	2.6942470	20	5 20.2	19.5
343805 2011 GR ₈₀	17.6	X	160.51161	329.88843	273.39265	0.36284	0.1487997	0.27151803	2.3619477	20	12 22.5	21.1
343806 2011 GQ ₈₂	17.4	X	171.44620	236.63629	73.10694	7.05982	0.1261207	0.29545412	2.2325919	20	—	—
343807 2011 GE ₈₃	16.4	X	256.48122	243.19668	80.78241	7.44133	0.0375604	0.21992194	2.7182559	20	4 19.9	20.2
343808 2011 GJ ₈₅	17.4	X	234.09498	74.17064	181.31576	6.03063	0.0902473	0.29603554	2.2296677	20	—	—
343809 2011 HP ₁	16.5	X	41.64049	199.23400	74.69693	10.39155	0.1335343	0.24522254	2.5279150	20	9 27.6	19.8
343810 2011 HA ₃	16.0	X	282.46243	254.71642	94.04480	14.11199	0.1481401	0.23156519	2.6263577	20	6 7.5	19.5
343811 2011 HC ₆	17.5	X	167.08719	167.65043	61.58190	3.14585	0.1677470	0.27032320	2.3689024	20	12 9.9	21.0
343812 2011 HU ₆	17.8	X	126.57588	120.69166	164.47909	6.43329	0.0786647	0.27681721	2.3317071	20	—	—
343813 2011 HM ₇	15.9	X	355.12337	199.94716	84.23971	14.96590	0.2241003	0.23008427	2.6376152	20	7 16.4	18.1
343814 2011 HK ₉	16.8	X	14.78138	70.34867	171.72071	8.66944	0.1271072	0.22787601	2.6546279	20	6 17.7	19.8
343815 2011 HT ₁₀	17.1	X	126.12961	97.63924	218.19887	3.10964	0.1811440	0.28299437	2.2976517	20	—	—
343816 2011 HO ₁₁	16.4	X	202.23772	198.76199	103.10840	4.55968	0.2267486	0.18473238	3.0533320	20	1 21.8	21.8
343817 2011 HT ₁₁	17.7	X	117.78206	127.92388	118.55939	3.39152	0.1768695	0.25633065	2.4543455	20	11 16.0	21.7
343818 2011 HZ ₁₁	16.6	X	18.90503	89.62071	185.00613	13.39508	0.1575904	0.23257837	2.6187246	20	8 13.9	19.6
343819 2011 HU ₁₂	16.5	X	36.53922	170.52852	103.48233	14.16954	0.0994762	0.23959073	2.5673754	20	9 13.9	19.9
343820 2011 HV ₁₇	17.1	X	113.32345	305.35478	48.79921	6.91517	0.1855302	0.29363371	2.2418098	20	—	—
343821 2011 HF ₁₈	16.6	X	49.38639	287.91194	26.02589	6.47804	0.1443815	0.25994263	2.4315565	20	11 27.2	19.8
343822 2011 HJ ₁₉	16.8	X	45.74030	0.74402	180.96937	5.20235	0.0944707	0.21890816	2.7266418	20	5 12.9	20.0
343823 2011 HE ₂₀	16.6	X	22.78337	150.11680	141.19131	15.07105	0.0971694	0.23732536	2.5836873	20	9 12.5	19.7
343824 2011 HQ ₂₀	17.5	X	197.93960	82.89325	184.12192	4.23178	0.1206451	0.29202092	2.2500564	20	—	—
343825 2011 HS ₂₂	16.2	X	252.73775	253.41766	73.81273	9.85109	0.2003114	0.21004818	2.8027870	20	4 4.1	20.8
343826 2011 HX ₂₃	16.7	X	321.94438	77.47555	211.33870	8.14252	0.1893059	0.22025558	2.7155102	20	5 9.5	19.7
343827 2011 HA ₂₄	16.6	X	330.53898	350.08676	347.33629	5.64512	0.3309797	0.23720440	2.5845656	20	7 30.4	17.8
343828 2011 HC ₂₆	17.3	X	340.69369	156.47851	141.88124	2.96333	0.1929607	0.22876979	2.6477091	20	7 1.9	19.5
343829 2011 HE ₂₆	17.5	X	208.93477	186.32825	73.38690	2.29033	0.1375365	0.28928356	2.2642283	20	—	—
343830 2011 HC ₂₇	15.7	X	187.23616	85.81410	159.83047	13.05187	0.0694598	0.16900968	3.2398755	20	—	—
343831 2011 HD ₂₇	17.4	X	243.54171	132.60222	94.15419	7.48171	0.0927509	0.29491766	2.2352985	20	—	—
343832 2011 HN ₂₇	15.5	X	178.04361	80.21983	124.86790	24.02158	0.2771945	0.17355459	3.1830635	20	—	—
343833 2011 HR ₂₇	17.3	X	122.90284	153.21401	102.47370	3.76923	0.1565890	0.26301916	2.4125582	20	12 1.8	21.1
343834 2011 HT ₂₇	15.5	X	238.22768	117.21420	142.06787	12.37167	0.0907562	0.18698163	3.0287964	20	1 6.4	20.2</

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>		
343841	2011	HW ₃₂	17.3	X	2.34507	150.86890	138.64855	4.75176	0.1599417	0.23141860	2.6274666	20	8 6.7	19.9
343842	2011	HV ₃₃	16.3	X	318.58547	205.49061	131.01451	6.76540	0.1437226	0.23342740	2.6123708	20	7 19.2	19.1
343843	2011	HR ₃₄	17.2	X	31.33460	185.73233	123.41482	6.44308	0.1718375	0.24737900	2.5132026	20	11 3.1	20.3
343844	2011	HA ₃₈	16.2	X	279.47492	258.96875	64.46670	17.49478	0.2093589	0.21611292	2.7501026	20	4 26.5	20.3
343845	2011	HN ₃₈	18.3	X	103.79857	255.61470	13.15371	3.01849	0.1809388	0.26193698	2.4191985	20	11 30.3	22.1
343846	2011	HO ₃₈	16.7	X	146.66643	7.56258	194.37004	14.39403	0.0601077	0.25343921	2.4729776	20	10 17.6	20.2
343847	2011	HF ₃₉	16.8	X	56.83463	138.91209	116.12915	5.35696	0.2235914	0.23918005	2.5703134	20	10 1.8	20.3
343848	2011	HT ₃₉	16.1	X	232.41757	314.75961	86.65623	12.09962	0.2151557	0.22806355	2.6531723	20	6 9.9	20.5
343849	2011	HQ ₄₁	16.0	X	293.69940	82.13124	206.86154	24.41888	0.1265423	0.20932381	2.8092494	20	4 5.2	19.9
343850	2011	HP ₄₃	15.4	X	151.07869	222.07832	105.05459	17.72538	0.1935182	0.17443240	3.1723757	20	1 9.9	20.5
343851	2011	HA ₄₄	17.6	X	85.27086	121.67761	148.82146	3.01842	0.0758614	0.25648740	2.4533454	20	11 6.4	21.0
343852	2011	HY ₄₄	17.5	X	31.78709	64.24261	194.68172	11.00858	0.0617637	0.23728304	2.5839945	20	7 31.5	20.9
343853	2011	HP ₄₅	16.8	X	21.11810	223.97130	95.47566	13.84942	0.1759423	0.24590594	2.5232292	20	11 5.5	20.0
343854	2011	HF ₄₆	17.4	X	70.06397	244.26727	96.71883	7.68930	0.1391278	0.27192764	2.3595751	20	—	—
343855	2011	HZ ₄₆	16.8	X	345.09926	102.76365	183.79845	12.15493	0.1624513	0.22857842	2.6491867	20	6 24.6	19.7
343856	2011	HH ₄₉	17.4	X	128.14853	211.77720	105.30524	11.00062	0.1423635	0.27907211	2.3191300	20	—	—
343857	2011	HA ₅₀	16.2	X	357.90806	89.29625	190.87744	12.86281	0.1683468	0.22702001	2.6612967	20	7 10.9	19.1
343858	2011	HP ₅₂	15.9	X	315.40809	242.47880	95.62358	15.20160	0.1920518	0.23019163	2.6367950	20	7 8.7	18.6
343859	2011	HU ₅₂	15.8	X	198.97069	122.46773	168.61904	15.01613	0.2380078	0.17984305	3.1084242	20	1 6.9	21.5
343860	2011	HP ₅₅	17.3	X	121.23858	147.43055	120.62811	6.46917	0.1620106	0.26535527	2.3983777	20	12 15.8	21.2
343861	2011	HU ₅₅	16.4	X	137.30973	352.41656	180.88818	14.57939	0.0438055	0.23934795	2.5691113	20	8 23.9	20.1
343862	2011	HC ₆₀	17.1	X	156.59012	217.99002	77.25747	6.59122	0.1721092	0.28523392	2.2856090	20	—	—
343863	2011	HT ₆₀	17.3	X	119.07433	227.96862	75.89033	7.17258	0.1562573	0.27513276	2.3412143	20	—	—
343864	2011	HU ₆₀	17.5	X	89.83980	154.77464	127.34607	2.17258	0.1718707	0.26303081	2.4124869	20	12 4.5	21.3
343865	2011	HO ₆₂	15.0	X	159.34027	185.40082	150.64218	23.82871	0.1577840	0.18062176	3.0994835	20	1 23.4	20.1
343866	2011	HN ₆₄	17.4	X	49.88437	166.65045	106.63991	7.20869	0.1923952	0.24518512	2.5281722	20	10 14.8	20.8
343867	2011	HH ₆₅	17.2	X	315.54963	119.81473	170.20915	7.50767	0.1482042	0.22189562	2.7021133	20	5 7.9	20.5
343868	2011	HL ₆₆	15.7	X	180.20232	271.89558	90.48426	12.17342	0.1718708	0.20016812	2.8942727	20	3 17.3	20.7
343869	2011	HF ₆₉	17.9	X	306.79483	352.83223	183.49895	4.05477	0.0830633	0.29946254	2.2126245	20	—	—
343870	2011	HT ₇₁	17.1	X	297.01991	218.95230	93.28565	3.32602	0.0443323	0.22183809	2.7025805	20	5 24.5	20.5
343871	2011	HW ₇₁	16.9	X	327.28374	190.09501	101.92474	2.96235	0.0692904	0.22417022	2.6838038	20	6 7.2	20.2
343872	2011	HX ₇₄	16.9	X	330.58346	89.09196	164.09209	8.18994	0.1586337	0.21518685	2.7579871	20	4 10.5	20.1
343873	2011	HB ₇₅	17.0	X	285.37897	140.82980	172.30671	7.96410	0.2200336	0.21569029	2.7536939	20	4 14.7	20.8
343874	2011	HO ₇₅	16.6	X	277.10401	151.00950	178.05682	14.20231	0.1141706	0.21919096	2.7242960	20	5 11.5	20.5
343875	2011	HS ₇₅	17.7	X	188.48704	61.56897	229.60467	5.22091	0.1564029	0.29055845	2.2576003	20	—	—
343876	2011	HU ₇₆	16.4	X	297.78532	127.56831	196.15512	11.47526	0.0942087	0.22348645	2.6892753	20	6 3.3	20.0
343877	2011	HT ₇₇	17.5	X	218.15147	45.53607	184.17731	3.31681	0.0979245	0.28331024	2.2959435	20	—	—
343878	2011	HX ₇₈	17.1	X	280.18912	102.06911	116.95211	7.15231	0.0897920	0.29895516	2.2151272	20	—	—
343879	2011	HP ₇₉	16.9	X	124.55112	81.73408	154.62054	5.89979	0.1624519	0.25701231	2.4500038	20	11 10.3	20.8
343880	2011	HR ₈₀	17.8	X	68.57387	288.75336	21.53455	1.27782	0.1841092	0.26171033	2.4205951	20	12 19.4	21.3
343881	2011	HW ₈₂	17.5	X	197.26492	152.42235	76.66573	4.60527	0.0844753	0.27862954	2.3215851	20	—	—
343882	2011	HA ₈₃	17.5	X	182.66105	87.81604	190.97321	2.89095	0.1660138	0.28620462	2.2804381	20	—	—
343883	2011	HV ₈₃	17.9	X	181.60203	122.98000	120.31031	2.92080	0.1587996	0.27892876	2.3199245	20	—	—
343884	2011	HQ ₈₄	17.2	X	73.66359	1.61721	212.04048	3.44468	0.0916949	0.23495852	2.6010094	20	8 4.4	20.7
343885	2011	HQ ₈₅	16.7	X	324.82250	90.98209	197.40413	23.91963	0.1367289	0.22593568	2.6698048	20	5 22.1	20.1
343886	2011	HL ₉₀	17.4	X	90.37354	202.51324	105.77515	5.34653	0.1477454	0.26942091	2.3741884	20	—	—
343887	2011	HQ ₉₀	17.1	X	34.01377	237.84316	111.13479	6.82078	0.1593151	0.26434736	2.4044702	20	12 28.4	20.1
343888	2011	HT ₉₀	17.3	X	121.20304	177.90200	137.48893	6.92390	0.1403846	0.28018214	2.3130006	20	—	—
343889	2011	HT ₉₃	17.3	X	32.51909	166.66973	71.27320	5.19961	0.0815252	0.22917918	2.6445550	20	7 8.1	20.5
343890	2011	HZ ₉₄	16.6	X	239.59266	240.57227	99.18573	6.62069	0.0633682	0.21211284	2.7845696	20	4 17.1	20.7
343891	2011	HZ ₉₆	17.0	X	326.51835	87.74157	175.70944	9.26906	0.1100321	0.21517906	2.7580537	20	4 24.5	20.3
343892	2011	HK ₉₇	17.2	X	115.73852	67.65629	281.30606	6.42095	0.1450104	0.29043885	2.2582199	20	—	—
343893	2011	HG ₁₀₀	16.6	X	1.02469	19.20388	189.07777	11.98972	0.1270899	0.21723958	2.7405859	20	4 3.1	19.4
343894	2011	JH ₂	16.3	X	66.17748	189.39885	19.73449	10.01467	0.1396310	0.23614532	2.5922874	20	7 31.9	19.8
343895	2011	JC ₅	16.9	X	167.57017	119.33569	143.89381	7.24696	0.1287970	0.27571859	2.3378969	20	—	—
343896	2011	JK ₈	13.4	X	257.74283	138.80752	196.45610	11.73479	0.1277941	0.08340695	5.1880148	20	4 27.9	20.5
343897	2011	JK ₉	16.1	X	176.37364	183.54716	149.95852	10.91172	0.1158527	0.19047937	2.9916039	20	2 1.4	20.7
343898	2011	JT ₁₁	17.0	X	66.73811	232.77763	359.95666	2.70981	0.1773472	0.23863682	2.5742126	20	9 5.4	20.5
343899	2011	JW ₁₁	15.4	X	221.57271	233.89142	43.76280	10.09601	0.0779691	0.18876798	3.0096581	20	1 13.1	20.1
343900	2011	JD ₁₂	15.8	X	279.17186	265.57263	57.90219	13.17958	0.1802399	0.21654122	2.7464751	20	4 27.4	19.7
343901	2011	JE ₁₂	16.0	X	287.94569	246.86496	70.32755	8.66639	0.2243574	0.21587516	2.7521215	20	4 23.6	19.8
343902	2011	JF ₁₂	17.0	X	285.79427	183.72376	40.98142	7.05975	0.0547991	0.30115892	2.2043077	20	1 1.4	19.9
343903	2011	JQ ₁₃	15.2	X	28.58501	0.14541	252.31701	32.58797	0.1590088	0.23141926	2.6274616	20	7 18.3	18.8
343904	2011	JO ₁₇	17.0	X	51.40647	67.20143	172.14025	4.27546	0.1482589	0.23323866	2.6137800	20	8 18.2	20.3
343905	2011	JR ₁₇	15.5	X	144.95038	222.79877	86.42509	14.03882	0.1622481	0.17039154	3.2223351	20	—	—
343906	2011	JY ₂₄	16.7	X	358.20322	137.24638	203.41559	8.42419	0.2155124	0.24266814	2.5456237	20	10 25.8	19.0
343907	2011	JZ ₂₄	16.9	X	343.05716	133.53623	204.40039	9.02758	0.2205528	0.23688446	2.5868922	20	9 10.3	19.0
343908	2011	JK ₂₅	17.2	X	359.08306	168.85988	141.21359	5.21168	0.2413313	0.23881858	2.5729063	20	9 13.3	19.1
343909	2011	JW ₂₅	17.5	X	346.95572	145.46470	154.17006	4.60137	0.1765724	0.22911108	2.6450790	20	7 19.1	20.0
343910	2011	JZ ₂₅	17.1	X	26.30890	83.65073	214.54909	14.40188	0.1279669					

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Planet	<i>H</i>	<i>G</i>	<i>M</i>	ω	Ω	<i>i</i>	<i>e</i>	μ	<i>a</i>	TE	Oppos.	<i>V</i>
343921 2011 <i>KB</i> ₁	17.9	X	81.76765	198.96746	208.71108	6.92897	0.0959492	0.29365493	2.2417019	20	—	—
343922 2011 <i>KA</i> ₃	16.5	X	64.22976	334.90430	265.95039	7.82909	0.1195028	0.23792724	2.5793282	20	8 30.6	20.0
343923 2011 <i>KQ</i> ₃	16.8	X	255.87331	248.88941	292.05722	7.32997	0.0769584	0.28167973	2.3047951	20	—	—
343924 2011 <i>KW</i> ₄	16.6	X	201.09151	207.23389	113.92566	2.71209	0.1375080	0.19079396	2.9883145	20	2 11.2	21.3
343925 2011 <i>KM</i> ₆	17.4	X	103.32356	216.98071	61.17846	7.13727	0.1799065	0.25899606	2.4374775	20	12 10.9	21.3
343926 2011 <i>KR</i> ₇	15.9	X	191.91015	195.98566	99.38335	3.52630	0.2086819	0.17912627	3.1167109	20	1 7.1	21.2
343927 2011 <i>KO</i> ₉	17.7	X	230.95707	356.44485	191.35056	4.64414	0.1599785	0.27723210	2.3293801	20	12 31.1	20.4
343928 2011 <i>KY</i> ₉	16.4	X	300.07443	255.11240	76.72907	11.22917	0.1299254	0.22480789	2.6787263	20	6 11.5	19.5
343929 2011 <i>KW</i> ₁₀	15.6	X	146.49195	219.88274	111.92458	18.20183	0.2247265	0.17673098	3.1448089	20	2 13.5	20.6
343930 2011 <i>KU</i> ₁₁	15.9	X	177.39174	267.21253	46.92337	18.85562	0.2756354	0.17704382	3.1411032	20	1 23.2	21.8
343931 2011 <i>KG</i> ₁₂	17.3	X	50.90980	10.92345	247.36584	3.73666	0.1666835	0.23642548	2.5902392	20	9 14.7	20.7
343932 2011 <i>KV</i> ₁₂	15.9	X	217.61151	108.12968	181.07603	17.20900	0.1705049	0.18443903	3.0565687	20	1 17.4	21.3
343933 2011 <i>KE</i> ₁₄	16.9	X	359.67342	116.36180	187.73519	3.76875	0.1357743	0.23341877	2.6124352	20	8 20.9	19.5
343934 2011 <i>KK</i> ₁₆	17.1	X	154.03826	232.57446	24.57206	4.72329	0.1421445	0.26841740	2.3801022	20	—	—
343935 2011 <i>KW</i> ₁₆	16.3	X	203.83880	22.94171	212.27175	25.46894	0.2203040	0.27566542	2.3381975	20	—	—
343936 2011 <i>KB</i> ₁₈	16.9	X	117.23761	261.44364	293.97302	4.10645	0.1948975	0.24342107	2.5403717	20	9 9.9	21.0
343937 2011 <i>KS</i> ₁₈	16.8	X	33.59896	313.95852	112.68664	7.68477	0.0631361	0.28534684	2.2850060	20	—	—
343938 2011 <i>KY</i> ₁₈	16.0	X	59.10105	182.67120	78.09544	8.85747	0.1783424	0.24035116	2.5619574	20	10 7.9	19.6
343939 2011 <i>KC</i> ₁₉	17.2	X	57.34394	209.48310	95.67234	7.38086	0.1059579	0.25187380	2.4832135	20	11 21.3	20.5
343940 2011 <i>KC</i> ₂₂	17.2	X	315.87807	30.13030	260.51801	0.11761	0.0597840	0.21700417	2.7425675	20	5 19.6	20.7
343941 2011 <i>KZ</i> ₂₂	17.5	X	232.04735	184.26054	62.96390	5.53104	0.1325062	0.29072882	2.2567182	20	—	—
343942 2011 <i>KG</i> ₂₃	16.9	X	71.82368	122.14279	120.05960	3.78458	0.0603564	0.24083566	2.5585202	20	9 8.6	20.2
343943 2011 <i>KQ</i> ₂₃	16.5	X	124.22935	8.33564	244.59520	11.80484	0.2018271	0.25741888	2.4474235	20	11 28.9	20.4
343944 2011 <i>KX</i> ₂₃	16.4	X	26.40420	179.53426	92.25010	12.79792	0.1497675	0.23204835	2.6227107	20	8 31.1	19.6
343945 2011 <i>KQ</i> ₂₅	16.2	X	215.73614	206.01411	86.47733	3.01524	0.0832950	0.19624970	2.9326713	20	2 27.9	20.7
343946 2011 <i>KR</i> ₂₅	17.3	X	9.30007	22.76860	73.60034	6.10069	0.1209797	0.29021583	2.2593767	20	—	—
343947 2011 <i>KX</i> ₂₅	15.9	X	241.23317	274.56581	105.73545	8.01002	0.0562534	0.22240269	2.6980047	20	6 9.2	19.8
343948 2011 <i>KW</i> ₂₆	16.4	X	172.47437	120.04397	181.25097	10.08004	0.1227244	0.17370618	3.1812114	20	—	—
343949 2011 <i>KT</i> ₂₇	16.0	X	294.01239	191.99337	102.36222	9.65178	0.2038146	0.20950600	2.8076205	20	4 7.4	20.0
343950 2011 <i>KM</i> ₂₈	17.2	X	236.96025	285.55536	269.06161	4.05427	0.0603921	0.27924069	2.3181965	20	—	—
343951 2011 <i>KX</i> ₂₈	16.2	X	338.78815	144.72125	121.39868	10.11269	0.1594054	0.21493213	2.7601657	20	5 15.8	19.3
343952 2011 <i>KO</i> ₃₀	16.1	X	24.09981	318.46830	268.77913	10.47402	0.1113432	0.22242634	2.6978134	20	6 11.1	19.0
343953 2011 <i>KO</i> ₃₀	17.0	X	113.98689	11.02148	276.73610	6.82294	0.1234598	0.26398419	2.4066749	20	12 31.9	20.6
343954 2011 <i>KW</i> ₃₀	16.3	X	223.18112	146.88757	152.87779	5.53765	0.0836818	0.19144105	2.9815768	20	2 7.2	20.9
343955 2011 <i>KJ</i> ₃₂	16.9	X	344.99706	49.01867	235.32382	2.88523	0.0536212	0.22440399	2.6819396	20	6 25.2	20.1
343956 2011 <i>KD</i> ₃₃	15.7	X	166.00557	154.38389	191.42207	27.79205	0.0944368	0.18434406	3.0576184	20	2 1.7	20.8
343957 2011 <i>KQ</i> ₃₃	16.0	X	302.33396	233.50549	106.55424	9.93586	0.1017892	0.22875671	2.6478100	20	7 12.9	19.3
343958 2011 <i>KS</i> ₃₃	16.2	X	309.50839	47.24087	236.56164	8.62793	0.1080460	0.21247617	2.7813943	20	4 22.9	19.7
343959 2011 <i>KY</i> ₃₃	17.2	X	62.34724	289.05581	295.83882	4.24965	0.2201188	0.23442423	2.6049600	20	8 24.3	20.7
343960 2011 <i>KC</i> ₃₇	17.1	X	335.77482	100.62547	224.82587	11.61495	0.1914775	0.22968515	2.6406699	20	7 29.5	19.9
343961 2011 <i>KL</i> ₃₉	16.7	X	327.59451	344.63597	324.64447	2.68379	0.0602048	0.22578116	2.6710227	20	7 3.2	19.8
343962 2011 <i>KF</i> ₄₃	17.1	X	330.06814	84.97890	157.94290	3.63369	0.1171728	0.21158346	2.7892123	20	3 31.3	20.5
343963 2011 <i>KO</i> ₄₃	16.2	X	238.82926	14.11033	198.89873	9.10709	0.0295414	0.17545207	3.1600725	20	—	—
343964 2011 <i>KA</i> ₄₅	17.0	X	68.11937	79.08455	108.47682	3.16999	0.0272170	0.22375181	2.6871486	20	6 12.3	20.4
343965 2011 <i>KK</i> ₄₈	17.7	X	235.31437	358.39454	193.39245	6.34337	0.0494698	0.27793656	2.3254424	20	—	—
343966 2011 <i>LR</i>	15.9	X	358.74906	218.00551	94.05273	13.36098	0.0873769	0.23438821	2.6052268	20	9 4.1	19.1
343967 2011 <i>LK</i> ₁	17.0	X	262.21913	151.75301	187.49658	5.90136	0.0388725	0.21813432	2.7330866	20	5 15.3	20.7
343968 2011 <i>LC</i> ₁₁	15.8	X	164.57548	151.80571	174.39378	17.48024	0.2043826	0.17726310	3.1385122	20	1 18.6	21.3
343969 2011 <i>LZ</i> ₁₁	16.7	X	293.28848	252.68517	90.76876	3.55221	0.0795245	0.22558699	2.6725552	20	6 25.6	20.0
343970 2011 <i>LK</i> ₁₂	16.8	X	287.76964	114.34691	195.59071	3.01872	0.0770438	0.21445033	2.7642982	20	5 3.8	20.4
343971 2011 <i>LU</i> ₁₃	16.4	X	344.89337	115.02953	162.19286	10.12949	0.1210006	0.22052557	2.7132934	20	6 13.1	19.6
343972 2011 <i>LL</i> ₁₄	16.0	X	143.69972	220.70728	107.90181	5.77659	0.2033307	0.17334694	3.1856051	20	1 6.1	21.0
343973 2011 <i>LA</i> ₁₅	17.2	X	196.63882	14.55408	178.75842	6.43447	0.0432330	0.26365215	2.4086952	20	12 8.4	20.4
343974 2011 <i>LU</i> ₁₅	17.1	X	339.85613	301.36088	11.47423	3.39657	0.1378237	0.22940173	2.6428444	20	7 25.9	19.5
343975 2011 <i>LC</i> ₂₀	13.3	X	291.83540	50.67082	265.44514	3.49901	0.1371157	0.08205122	5.2450065	20	5 10.8	20.2
343976 2011 <i>LC</i> ₂₁	13.6	X	329.50640	331.14163	299.80989	6.38193	0.1194087	0.08368986	5.1763164	20	5 9.1	20.1
343977 2011 <i>LG</i> ₂₁	13.8	X	222.16363	115.93229	266.31997	7.67669	0.0771444	0.08201400	5.2465931	20	5 18.1	21.0
343978 2011 <i>LK</i> ₂₅	18.1	X	331.50641	269.13581	276.59203	2.47947	0.0591702	0.30425052	2.1893499	20	1 7.8	20.5
343979 2011 <i>LX</i> ₂₆	15.9	X	207.32840	125.83821	164.22447	11.38638	0.1219739	0.18003544	3.1062093	20	1 11.9	21.1
343980 2011 <i>LZ</i> ₂₆	16.3	X	304.11256	197.07357	100.20367	15.31327	0.1817245	0.21324408	2.7747130	20	4 30.3	20.1
343981 2011 <i>LA</i> ₂₇	16.1	X	268.66794	71.54151	195.68366	9.84610	0.1021122	0.19577771	2.9373828	20	2 11.6	20.5
343982 2011 <i>MA</i> ₃	16.1	X	340.20872	228.74986	98.05582	10.47906	0.1404359	0.23181267	2.6244880	20	8 21.0	18.9
343983 2011 <i>MO</i> ₃	16.1	X	173.43311	127.79337	171.61472	11.09899	0.0604230	0.17589189	3.1548025	20	—	—
343984 2011 <i>MS</i> ₅	15.8	X	236.21548	358.75336	281.95206	10.08292	0.1982608	0.17912758	3.1166958	20	1 23.3	21.0
343985 2011 <i>OX</i>	17.1	X	138.91453	72.60441	171.55468	5.81483	0.0860806	0.25202121	2.4822451	20	12 1.6	20.8
343986 2011 <i>OZ</i> ₈	16.6	X	350.90709	282.51457	269.87640	8.11553	0.0289956	0.17949817	3.1124045	20	3 2.8	21.0
343987 2011 <i>OK</i> ₁₂	15.2	X	87.33303	132.22331	293.10007	11.35408	0.0696487	0.17290662	3.1910110	20	2 8.2	19.7
343988 2011 <i>OJ</i> ₁₈	16.1	X	90.81700	338.20710	255.30260	13.46181	0.0768162	0.22816731	2.6523679	20	9 13.1	20.2
343989 2011 <i>OR</i> ₂₄	15.6	X	165.23054	42.21738	290.59261	12.94637	0.1402319	0.17047905	3.2212323	20	1 24.4	20.7
343990 2011 <i>OG</i> ₃₈	17.6	X	209.86960	281.80236	308.28534	6.59234	0.1482582	0.26957795	2.3732663	20	—	—
343991 2011 <i>OZ</i> ₃₈	15.9	X	145.11505	82.36955	313.01014	7.89556	0.0269413	0.18536419	3.0463900	20	3 5.0	20.3
343992 2011 <i>OP</i> ₅₃	16.1	X										